ME 392 - PRACTICE QUESTIONS

Questions **1 – 5** that follow have a statement followed by possible completions that make the statement true. Use the key given below to answer the questions.

KEY

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| WRITE | a | if | i only | IS TRUE |
|  | b |  | ii only |
|  | c |  | i and ii only |
|  | d |  | i., ii., and iii only |
|  | e |  | i, ii, iii and iv |

1. Method Study approach to job design involves the following steps:
2. Select the work to be studied and record the facts;
3. Perform operation analysis and develop the most practical, effective and efficient method;
4. Install the new method and maintain its use;
5. Standardize the methods
6. After an analyst has completed the Operation Process Chart, he in ready to use it in
   * 1. Work measurement
     2. Operations analysis
     3. Work sampling
     4. Plant layout
7. In Operations Analysis, the Design of the Part is the second point to consider after Purpose for the operation has been considered. To improve the design to make it less expensive to manufacture, the analyst should consider the following points:
   * 1. Reduce the number of parts, simplifying the design
     2. Utilize a better material
     3. Using supplies and tools more economically
     4. Using set-up and tooling
8. In Methods work one usually uses some process charts, each of which has specific applications. These process charts include:
   * 1. Operator process chart
     2. Flow process chart
     3. Precedence diagram
     4. Gantt chart
9. The number of effective and physical basic divisions of motion developed by the Gilbreths include
10. Reach and move
11. Grasp and release
12. Use and disassemble
13. Pre-position and use

**From question 6 – 10, choose the best answer**

1. How is IE similar to the other major engineering specializations, civil, mechanical, electrical, and chemical?
   1. It is concerned with analysis and design,
   2. It applies the laws andmaterials of nature to useful, and constructive purposes.
   3. It is interestd in humans as an integral part of th system
   4. a and b
   5. a, b ans c
2. What events are recorded on an operation process chart?
   1. operation, and inspection,
   2. Delay and storage
   3. travel or movement
   4. Only operation
   5. inspection only
3. Name five of the ten considerations of operation analysis?
   1. Purpose of operation and design of the part
   2. materials and setup and tools and working conditions
   3. time study, layout and process of manufacture,
   4. Performance Rating, tolerances and specification,
   5. a and b
4. Methods analysis focuses on:
   1. the design of machines used to perform a task
   2. how a task is accomplished
   3. the raw materials that are consumed in performing a task
   4. reducing the number of steps required to perform a task
5. Methods Engineering is the process that
   1. continuously improves the way that methods are performed.
   2. produces designs for new work processes.
   3. Reduces the labour input of a job.
   4. None of the above.

**Use the following information to answer questions 11 - 13**

A time study analyst observed that a worker produced 40 parts in a one-hour period and rated the worker at 110%. The company allows 15% of job time for personal, fatigue and delay allowances.

1. What is the average time per part?

a. 1.2 min/parts

b 47.1 seconds/part

c. 4.26 min./part

d. 1.5 min./part

e. 0.67 min./part

1. What is the normal time per part?

a. 1.65 min/part

1. 51.8 seconds./part
2. 1.32 min./part
3. 4.69 min/part
4. 0.74 min./part
5. What is the standard time per part?

a. 1.94 min/part

b. 1.55 min./part

c. 89.6 seconds./part

d. 5.52 min/part

e. 1.90 min./part

1. An operator process chart is used to
2. study and improve the utilization of operator(s) and machine(s).
3. investigate movement of people and materials.
4. analyse body movements of a worker at his/her work station
5. study and improve the volume of materials flow in a plant.
6. Investigate a crew and the machines that they work with
7. i. Draw an operator process chart

ii When is it used in Method Study

1. i Draw an operations process chart
   1. Discuss its use in Methods Study
2. i. Draw a flow Diagram

ii. Discuss its use in method study