

Question Bank (I-scheme)

Name of subject: Industrial Engg. & Quality Control

Unit Test: I

Subject code: 22657

Course: ME6I

Semester: VI

Chapter 1: Work Study

2 marks questions

1. Define industrial engg. State its need.
2. Define method study.
3. Explain the scope of method study.
4. State the objectives of method study.
5. State the objectives of work measurement.
6. Define time study. List the equipment's for time study
7. Draw any four therbligs symbols with colour name.
8. Explain any four symbols in Process charts.
9. Draw any four symbols in process chart.
10. Define allowance. List the type of allowances.

4 marks questions

1. State the basic procedure of work study.
2. State the basic procedure of work measurement.
3. Draw two handed process chart for the assembly of Nut and Bolt with summary.
4. Draw two handed process chart for an activity of replacing the old battery of mobile handset.
5. Explain string diagram with neat sketch.
6. Explain the general steps for conducting the time study.
7. Explain the technical consideration while selecting the work for method study.
8. Explain the economic consideration while selecting the work for method study.
9. Explain the human consideration while selecting the work for method study
10. Draw a outline process chart to change SIM CARD of a mobile phone.
11. A particular activity on the shop floor consists of three elements. Calculate the standard time for the activity. The various allowances are given as percentage of the normal time. Calculate the standard time for each element.

Elements	A	b	C
Observed time	1.0	1.5	2.0

(min)

Rating factor (%)	125	120	110
Allowances (%)	20	15	20

12. A particular activity on the shop floor consists of three elements. Calculate the standard time for the activity. The various allowances are given as percentage of the normal time.

Elements	A	b	C
Observed time	1.2	0.50	0.80

(min)

Rating factor (%)	80	90	75
Allowances (%)	22	19	20

13. A worker takes 15 minutes as a standard time for a job in which total allowance is 20% of normal time. If the rating of worker is 100%. Find the actual time required by the worker.

Chapter2. PROCESS PLANNING

2 marks questions

1. Define production.
2. State factor affecting production.
3. Define supply chain management.
4. State any four objective of supply chain management.
5. State any four functions of supply chain management.
6. State information required for process planning.
7. Define process planning. State its significance.
8. List down the manufacturing operation sequence in process planning.
9. State the advantage and disadvantages of combined operations.
10. Define Activity and Critical path.

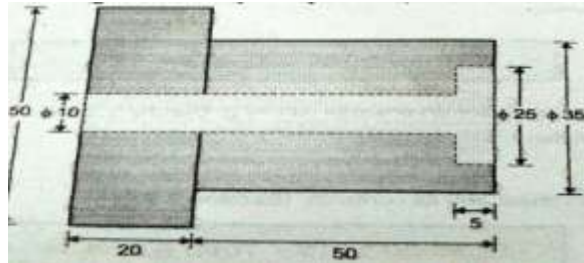
4 marks questions

1. Write eight procedural steps involved in process planning.
2. Explain the steps in process planning.
3. State the factors affecting the process planning.
4. Prepare an operation sheet to produce a hexagonal nut having right hand thread.
5. Explain working drawing.
6. Define operation sheet. State the information contain by operation sheet.
7. Explain the process operation sheet and its contains.
8. Prepare operation process sheet and sequence of operation by taking suitable example. Assume suitable cutting parameter.
9. State and explain how the different operation can be combined.

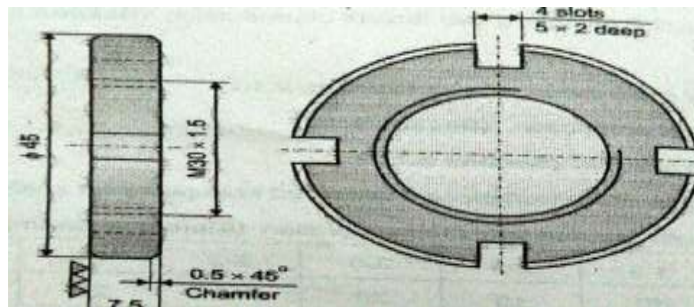
10. Explain the concept of Line balancing with example.

11. State objective of CPM and PERT.

12. Prepare operation process sheet and sequence of operation for the component shown. Assume suitable cutting parameter.



13. Prepare operation process sheet and sequence of operation for the ring nut assume suitable cutting parameter and raw material 50×10mm blank of carbon steel.



14. From the Activity given below Calculate project duration.

i) Construct the network. ii) Find out the critical path.

Operation	Pre-operation	Duration (days)
A	---	2
B	A	3
C	A	3

D	B	4
E	C	3
F	E, D	4

15. A project consists of seven activities given below. Draw the network and calculate EST, LST, EFT, LFT and float. Mark the critical path and final total project duration.

Activity	Post- Activity	Duration in days
A	B, C	8
B	D	10
C	E	12
D	F	6
E	G	4
F	G	3
G	---	2

Chapter3. ERGONOMICS

2 marks questions

1. Define ergonomics.
2. State need of ergonomics.
3. State advantages of ergonomics
4. State goal of ergonomics.
5. State ergonomic considerations.
6. Explain components of ergonomics.
7. Define Anthropometry.
8. State steps to apply anthropometry data.
9. Define Man-Machine system.
10. List types of controls devices.
11. List the example of spatial compatibility.
12. List the method of optimizing vibrations in ergonomic.
13. Define fatigue.
14. List causes of fatigue.

4 marks questions

- 1. Explain types of Anthropometry.**
- 2. Explain concept of ergonomics.**
- 3. Explain objective of ergonomics.**
- 4. Explain Man-Machine system**
- 5. Explain three types of Man-Machine system**
- 6. Explain use of ergonomics to increase productivity.**
- 7. Explain two types of body measurements in anthropometry.**
- 8. Explain principle in application of anthropometry data.**
- 9. Explain types of control in ergonomics.**
- 10. Explain types of displays in ergonomics.**
- 11. List the types of displays and draw sketch of any two.**
- 12. Explain environmental factor while designing controls.**
- 13. Explain visual display and state its types.**
- 14. Explain the compatibility in design of displays and controls.**
- 15. Role of ergonomic or consideration in design of controls.**
- 16. Role of ergonomic or consideration in design of displays.**
- 17. Role of ergonomic or consideration in design of environment and safety.**
- 18. Explain types of fatigue.**
- 19. Explain symptoms of fatigue.**
- 20. Explain causes of fatigue.**