Question 1

Here is a partial ANOVA table. Use = 0.05.

Source	SS	df	MS	Fstatistic	Fcritical
A	1200	6	x	y	z
B	900	6			
A × B	180	3			
Error	100	10			

The values of x, y and z should be:

Options:

A- 200, 20, 3.22

B- 12, 1.2, 4.06

C- 200, 20, 4.06

D- none of the above

Answer:

A

Question 2

An x-bar and R chart is used to monitor a process. One week ago a new type of raw material was introduced and since that time 60 points have been plotted on the xbar chart and all are in the middle third of the chart. The corresponding 60 points on the R chart are all below the average range. This indicates that:

Options:

A- the operator has been plotting the points incorrectly

B- it is time to recalibrate the gage used

C- it is time to recalculate the control limits

D- the material manager should be asked to go back to the previous raw material so the charts will more accurately reflect the process

Question 3

Question Type: **MultipleChoice**

The average number of defects is 21.6. Find the upper control limit for the c-chart.

Options:

A- 26.4

B- 24.6

C- 18.8

D- 26.2

E- none of the above

Answer:

E

Question 4

An indication of the experimental error is available because the design has:

Options:

A- multiple replications

B- multiple levels

C- multiple factors

Answer:

A

Question 5

A control chart will be used to monitor the number of scratches on a product. The following data have been collected:

number of scratches	6	5	7	5	6
sample size	120	110	111	128	110

The appropriate control chart to use is:

Options:

A- x-bar and R

B- median

C- individual and moving range

D- p

E- np

F- u

G- c

Answer:

F

Question 6

If it is desirable to maximize the response R, the following levels should be used:

Options:

A- A+ and B+

B- A+ and B--

C- A-- and B+

D- A-- and B--

E- none of the above

Answer:

A

Question 7

Question Type: **MultipleChoice**

Calculate the interaction effect:

Options:

A- 20

B- 25

C- 30

D- 40

E- none of the above

F- Answer Pending

Answer:

F