PRE COURSE LLN REVISION ANSWER WORKSHEET

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1) NDT is an acronym for something. What does NDT stand for?

NDT stands for Non-Destructive Testing

2) Define AC (Alternating Current)?

Alternating Current is current that reverses its direction of flow at regular intervals.

3) Match the following words with their correct definitions

Word	Definition	Answer *eg a = 3*
a. Ampere	1. The extent of vibratory movement measured from the mean position to an extreme; the maximum departure of alternating voltage or current from the average value; indicated by vertical height on an A-scan presentation	a = 2
b. Elasticity	2. This is the unit of electrical current. One ampere is the current that flows through a conductor having a resistance of one ohm, at a potential of one volt	b = 4
c. Amplitude	3. The unit of electromotive force that tends to cause an electric current to flow through a conductor	c = 1
d. Voltage	4. The property of a material by virtue of which it tends to recover its original size and shape after deformation	d = 3

4) Circle the term below that matches the following definition:

An interruption in the normal physical structure or configuration of a part such as cracks, laps, seams, inclusions, porosity.

a) Eddy Current
b) Defect
c) Wavelength
(d) Discontinuity
e) None of the above

5) Circle the term below that matches the following definition:

A discontinuity that interferes with the usefulness of the part. A fault in any material or part detrimental to its serviceability.

a) Amplitude
b) Discontinuity
(c) Defect
d) Radiation
e) None of the above

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6) Consider the following paragraph and answer the questions relating to it:

*A **Composite Filter** which is used in Radiography is a filter of two or more materials chosen so that the longer wavelengths of a beam are readily absorbed, and within this range undesirable radiation transmission is avoided. The materials are usually arranged so that the second material filters secondary radiation produced in the first material and so on. A particular example is the 'Thoraeus Filter' which consists of 0.44 mm of tine, 0.25 mm of copper and 1 mm of aluminium in this order, in the beam of radiation.*

a) How many materials make up a Composite Filter?
Two or more materials

b) What is the name of the particular example given of a Composite Filter and what does the beam of radiation consist of?
'Thoraeus Filter' is the name of the particular example given and it consists of 0.44 mm of tine, 0.25 mm of copper and 1 mm of aluminium in this order, in the beam of radiation

c) Describe how materials are arranged in a Composite Filter & why.
The materials are usually arranged so that the second material filters secondary radiation produced in the first material and so on.

d) If you added the three mm measurements shown in this definition together what would the total be?
0.44 mm + 0.25 mm + 1 mm = 1.69 mm

7) Consider the following paragraph and answer the questions relating to it:

Quenching is the process of rapid cooling. There are more specific definitions of quenching relevant to specific circumstances including direct quenching, fog quenching, hot quenching, interrupted quenching, selective quenching, spray quenching and time quenching.

a) How many specific definitions of quenching are listed in this paragraph?
Seven

b) List the specific definitions of quenching?
direct quenching, fog quenching, hot quenching, interrupted quenching, selective quenching, spray quenching and time quenching

c) Is the process of quenching the process of rapid cooling?

☒ Yes ☐ No