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### Question: 1

Applying preheat when welding carbon manganese steel is normally done to avoid:

- A. Slag inclusions
- B. Hydrogen cracking
- C. Lack of sidewall fusion
- D. Porosity

**Answer: B**

### Question: 2

Which of following mechanical properties of a weld in carbon manganese steel is most affected if the heat input per unit length of weld is excessively high?

- A. Elongation
- B. Tensile strength
- C. Hardness
- D. Toughness

**Answer: D**

### Question: 3

You observe centerline cracking a weld that as been made one of five work stations each making similar components. The first action to take is:

- A. Impound all welding consumables
- B. Report the occurrence to high authority
- C. Stop all welding
- D. Call for full NDT checks

**Answer: B**

### Question: 4

Which of the following defects is unlikely to be found by visual inspection.

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- A. Linear misalignment
  - B. Undercut
  - C. Overlap
  - D. Linear slag inclusion

**Answer: D**

### Question: 5

Which of the following welding processes uses a resistive heating system to achieve weld metal deposition.

- A. Manual metal arc welding
- B. Submerged-arc welding
- C. Electro slag welding
- D. Resistance spot welding

**Answer: D**

### Question: 6

Which of the following units could Charpy V notch energy be measured in?

- A. Pounds per square inch
- B. Joules
- C. Newtons per square millimeter
- D. None of the above

**Answer: B**

### Question: 7

The usual method of assessing the sensitivity of radiograph is by means of a:

- A. Dosimeter
- B. Fluoroscope
- C. IQI ( Penetrameter)
- D. Clinometer

**Answer: C**

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### Question: 8

Under normal contract conditions, weld procedure approval tests for pipe work are:

- A. Mandatory
- B. Depend upon site and weather conditions
- C. Dependent upon the contractor's confidence in his procedures
- D. Only required when CO2 welding is to be used.

**Answer: A**

### Question: 9

Which of the following destructive tests is not normally required for welder approval test for mild steel?

- A. Bend test
- B. Macro examination
- C. Impact tests
- D. Fracture tests

**Answer: C**

### Question: 10

Hydrogen controlled electrodes were developed principally for:

- A. The prevention of porosity
- B. The prevention of cracking
- C. The enhancement of arc voltage
- D. Their ease of arc starting

**Answer: B**

### Question: 11

For which of the following is pre-heating most likely to be required?

- A. Austenitic stainless steels
- B. High strength alloy steels
- C. Low and medium strength steels

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D. Low carbon steels

**Answer: B**

### **Question: 12**

Manual metal arc welding of low alloy steels is more likely to be performed with:

- A. Rutile electrodes
- B. Cellulosic Electrodes
- C. Iron powder electrodes
- D. Basic hydrogen controlled electrodes

**Answer: D**

### **Question: 13**

which of the following defects is more common to weld deposited by the CO-2 welding process than weld deposited by manual metal arc?

- A. Slag inclusion
- B. Excess penetration
- C. Lack of side fusion
- D. Tungsten inclusions

**Answer: C**

### **Question: 14**

Which defect would you expect to obtain in TIG welds in non-deoxidized steel?

- A. Under cut
- B. Porosity
- C. Tungsten inclusions
- D. Linear misalignment

**Answer: B**

### **Question: 15**

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Which of the following can arise from copper inclusions in a ferrite steel weld?

- A. Weld metal cracks
- B. HAZ cracks
- C. Lamellar tearing
- D. Porosity

**Answer: A**

### Question: 16

Which of the following is likely to give the highest impact strength in ferritic weld metal?

- A. Cellulosic electrodes
- B. Submerged arc with acid flux
- C. Spray transfer Co-2-welding
- D. Basic coated normal metal arc electrodes

**Answer: D**

### Question: 17

Which of the following methods of NDT would be most likely to detect lack of side fusion in ferritic steel welds?

- A. Penetrants
- B. Magnetic particles
- C. Radiography
- D. Ultrasonic flaw detector

**Answer: D**

### Question: 18

You suspected that ferritic steel plates, which have been edge, prepared contain crack in the prepared edges. Which NDT method would you use to check this?

- A. Radiography
- B. Magnetic particle
- C. Penetrants
- D. Ultrasonic flaw detector

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**Answer: B**

**Question: 19**

Which of the following defects do you not expect to find by visual examination of completed welds?

- A. Linear slag inclusions
- B. Under cuts
- C. Overlap
- D. Linear misalignment

**Answer: A**

**Question: 20**

Stress relief is not helpful in one of the following cases. Which one?

- A. In improving resistance to stress corrosion cracking
- B. In dimensional stability after machining improving
- C. In lowering the peak residual stress
- D. In softening the steel

**Answer: B**