

1. Which of the listed methods is applicable to the oxidation of steel?

- a Mechanical
- b Injection
- c Chemical
- d Sparking

2. Which of the following statements applies to the punching?

- a Performs in hot without significantly change the volumetric shape of the work piece
- b Performs in cold without significantly change the volumetric shape of the work piece
- c Performs in hot with significantly change the volumetric shape of the work piece
- d Performs in cold with significantly change the volumetric shape of the work piece

3. Which of the following statements describes the process of the roll forging?

- a Force spending between rotating metal rollers
- b Dispersion of metal between the rolls
- c Cut the metal with rollers
- d Punching metal with rollers

4. What is the main requirement for the welding of low carbon steels?

- a Both pieces are chemical resistant
- b Both pieces are not chemical resistant
- c Both pieces are of varying strength
- d Both pieces have the same strength

MULTIPLE CHOICE TEST

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5. Which of these instruments belongs to circular abrasive tools?

- a File for cutting, grinding, teeth grinding, etc.
- b Saw for cutting, grinding, teeth grinding, etc.
- c Knife for cutting, grinding, teeth grinding, etc.
- d Disc for cutting, grinding, teeth grinding, etc.

6. Best way to find gas leakage are?

- a by flame
- b by sniff
- c by matchstick
- d by soap solution

7. Who is able to repair electrical problems of power tools?

- a educated student
- b student by teacher monitoring
- c teacher
- d electrician

8. Roller meter exactness is?

- a 0,2 mm
- b 0,5 mm
- c 1,0 mm
- d 5,00 mm

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9. Under what thickness are sheet metal calling plates?

- a 1,00 mm
- b 1,5 mm
- c 3,00 mm
- d 5,00 mm

10. Steel is...?

- a alloy of iron and carbide
- b alloy of graphite and carbon
- c alloy of iron and carbon
- d sintered magnetite

11. If you are drilling a too big pre-hole – what will follow?

- a tight thread
- b threading tap breaking.
- c loose thread
- d big threading pressure

12. In bench grinding machine, between grinding stone and support cap to be maximum?

- a 0,5 mm
- b 2,00 mm
- c 6,00 mm
- d 12,00 mm

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13. Steel contains maximum on carbon of...?

- a 1,0 %
- b 1,7 %**
- c 2,5 %
- d 3,0 %

14. Brazing change to soldering at which temperature?

- a 230 C
- b 325 C
- c 450 C**
- d 575 C

15. Flame cutting uses which gas mixture?

- a oxygen - hydrogen
- b oxygen - acetylene**
- c oxygen – carbon dioxide
- d oxygen - argon

16. Welding groove preparation in assembly are best to doing by?

- a face grinder
- b bench grinding machine
- c abrasive belt grinder
- d angle grinder**

MULTIPLE CHOICE TEST
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17. What is the value in mm corresponding to 1 inch?

- a 25 mm
- b 2,45 cm
- c 24,5 mm
- d 25,4 mm

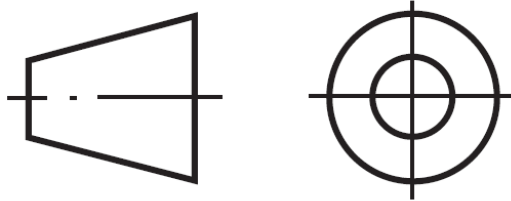
18. What is the “clear” diameter for a “medium size through hole” to let pass trough a M8 Screw?

- a 8 mm
- b 9 mm
- c 10 mm
- d 12 mm

19. What is the appropriate relation between rotation speed for drilling, and respective drilling tool?

- a The bigger the diameter of the drill, the higher the rotation speed should be
- b The bigger the diameter of the drill, the lower the rotation speed should be
- c The rotation speed of a drill does not depend on its diameter
- d The rotation speed of a drill must be always higher than 1000rpm

20. What does it mean the following image?



- a American projecting method
- b European projecting method
- c None of the previous methods
- d Method of isometric perspective

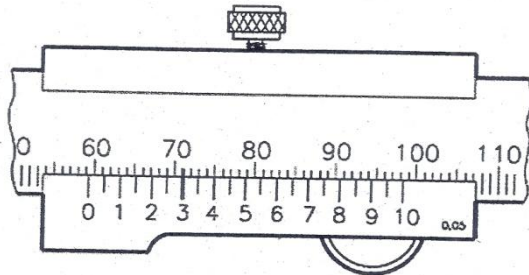
21. Which of the following designations of steels is the most widely used in welding structures?

- a CK45 / 1045
- b CK60 / 1060
- c ST37-3 / A284Gr.D
- d GG25 / A48-40B

22. What type of gas is used in MIG welding process?

- a CO₂
- b Oxygen
- c Argon
- d Acetylene

23. Look at the picture and say what measure is being read into the caliper?



- a 59,3 mm
- b 71 mm
- c 73 mm
- d 69,3 mm

24. Which ist he length of the stretch out of a circumference, if its diameter is 450 mm?

- a 1,414 mm
- b 2,862 mm
- c 900 mm
- d 2,826 mm

25. In an industrial drawing, what do regularly broken lines _ _ _ _ _ mean?

- a The visible edges of the represented shapes
- b The circumferences axes, holes and curves of the represented shapes
- c The hidden, invisible edges of the represented shapes
- d They are auxiliary lines to identify cuts, sections and to dimension the represented shapes

MULTIPLE CHOICE TEST
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26. Which gases are used to protect the stainless steel and aluminium weldings with T.I.G (GTAW) procedure.?

- a Carbon Dioxide
- b Argon / Helium**
- c Nitrogen
- d Oxygen + CO₂

27. Which materials could be cut with a plasma cutting equipment?

- a Only low alloys of steel and carbon
- b Only aluminium and titanium
- c Electrical conductor metals**
- d Methacrylates and polymers

28. Which is the difference between these two coated electrodes for shield metal arc welding, SMAW?

- Rutile AWS E-6013
- Basic AWS E-7018

- a The basic one E – 7018 has higher tensile strength than rutile**
- b Rutile E – 6013 has higher tensile strength than basic
- c Basic E – 7018 is stainless and rutile is not
- d Both might also be used with T.I.G (GTAW) procedure

MULTIPLE CHOICE TEST

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29. AISI 316 steel is an austenitic stainless steel, but it includes an (L) at the end, that is, AISI 316 L, which is the difference?

- a It does not have Nickel in its composition
- b It does not have Chromium in its composition
- c It has extra low content of Carbon
- d It has higher contents of Carbon in its composition

30. Which of the 3 manual procedures of welding provides higher productivity in any welding construction process?

- Shielded metal arc welding (SMAW)
- Semiautomatic M.I.G, M.A.G (GMAW)
- T.I.G (GTAW)

- a T.I.G (GTAW) procedure
- b Semiautomatic M.I.G, M.A.G (GMAW) procedure
- c Shielded metal arc welding (SMAW)
- d The three have the same productivity

31. 1000 μm means?

- a 1 mm
- b 1 m
- c 1000 mm
- d 10 cm

32. The right working temperature of a gauge is?

- a 15 C
- b 20 K
- c 20 C
- d 25 C

33. 10 MW means?

- a 10 MilliWatt
- b 10 MegaWatt
- c 10 MicroWatt
- d 10 KiloWatt

34. In the technical drawings, scale means?

- a Ratio between two representatives dimensions
- b Ratio between drawing dimensions and real dimensions
- c Ratio between real dimensions and drawing dimensions
- d Drawing measure's reduction

35. Basic size is?

- a The dimension aimed by the designer
- b The average dimension between lower and upper deviation
- c The fundamental deviation
- d The number over the dimension line

MULTIPLE CHOICE TEST

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36. Besides Iron and Carbon, in the steel there are always alloy elements

- a Yes, in trace
- b No, never
- c Yes, only if weakly bound
- d No, unless there are processing errors

37. Cast iron is better than steel in?

- a Mechanical strenght
- b Resilience
- c Weldability
- d Casting

38. For working with machine tools is better?

- a A nodular cast iron
- b A mild steel
- c A structural steel
- d An alloy steel with sulfur and lead

39. What types of files are there?

- a Flat file
- b Curved file
- c Round file
- d Wing file

MULTIPLE CHOICE TEST

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40. What clamping devices can be used to hold workpieces for machining?

- a Anvil
- b Vice clamps
- c Clamps
- d Vice

41. Which methods belong to the shape cutting process?

- a Filing
- b Drilling
- c Welding
- d Soldering

42. What does the feed rate depend on when drilling?

- a Air pressure
- b Clamping device
- c Workpiece material
- d Drill bit material

43. Which process is grinding a part of?

- a Joining process
- b Printing process
- c Chip-removing process
- d Casting process

MULTIPLE CHOICE TEST

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44. Which abrasive has the highest degree of hardness?

- a Corundum
- b Silicon carbide
- c Boron nitride
- d Diamond

45. What is not one of the working rules of tapping??

- a Drill the core hole in the required size
- b Ream the core hole to the exact dimension
- c Countersink the core hole
- d Use a suitable threading fluid

46. Watts are used to measure/determine which of the following values??

- a Work
- b Power
- c Output
- d Mass

47. Which angle does not occur with tools for cutting and shaping (e.g.: files, chisels)?

- a Fracture angle
- b Clearance angle
- c Wedge angle
- d Rake angle

MULTIPLE CHOICE TEST

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48. What tooth forms can saw blades have?

- a Curved tooth
- b Blind tooth
- c Union tooth
- d Angular tooth

49. Which of the listed parts belong to a file?

- a Tang
- b Blade
- c Handle
- d Mantle

50. What does the value 235 stand for in the steel designation "S235J0"?

- a Weight
- b Yield strength
- c Toughness
- d Tensile strength