PAPER – I
FITTER
(THEORY)
SEMESTER – II

Time: 3 Hrs.
Marks: 150

Note: Attempt all the questions.
All questions carry equal marks.

Choose the correct answer:

1. Process or the method of joining two metals permanently is called –
   a) Welding   
   b) Coupling  
   c) Forging   
   d) Blacksmithy

2. Which one of the following types of hammers is used for forming a rivet head by spreading the shank of the rivet?
   a) Ball peen hammer   
   b) Cross peen hammer  
   c) Straight peen hammer  
   d) Soft hammer

3. A grinding wheel marked with ‘C’ is made with the –
   a) Aluminium oxide   
   b) Silicon carbide  
   c) Diamond   
   d) Corundum

4. _______ is angle of twist drill.
   a) 118°   
   b) 138°  
   c) 90°   
   d) 60°

5. Which flame is suitable for welding of non-ferrous metals (brasses and bronzes)?
   a) Oxidising flame   
   b) Carburising flame  
   c) Neutral flame   
   d) None of these

6. In oxy-acetylene welding the flame temperature is –
   a) 1600-1700°C   
   b) 2000-2100°C  
   c) 2500-2600°C   
   d) 3200-3300°C

7. In oxy-acetylene welding color of oxygen cylinder is –
   a) Red   
   b) Maroon  
   c) Black   
   d) Brown

8. The inner cone of the flame has _______ temperature?
   a) Highest   
   b) Coldest  
   c) Moderate   
   d) Can't say

9. Which of the following joint has high corrosion resistance?
   a) Welding joint   
   b) Riveted joint  
   c) Bolted joint   
   d) None of these

Contd...2/-
10. Acetylene gas is stored in cylinders in –
   a) Solid form  
   b) Gaseous form  
   c) Liquid form  
   d) Any one of these

11. Junction between weld face and base metal is known as?
   a) Throat  
   b) Toe  
   c) Root  
   d) Puddle

12. Weld pass is associated with the movement of?
   a) Torch  
   b) Metal  
   c) Flux  
   d) Electrode

13. Amount of current required to generate the arc under no load condition is called?
   a) Open circuit current  
   b) Closed circuit current  
   c) Short circuit current  
   d) Arc current

14. If a worker has suffered from electric shock, he should be –
   a) Given an alcoholic drink  
   b) Given a cold drink  
   c) Made to walk  
   d) Kept warm and covered

15. Which type of fire extinguisher is used in a welding shop?
   a) Foam type extinguisher  
   b) Dry powder extinguisher  
   c) CO₂ extinguisher  
   d) Halon extinguisher

16. For tapping with M5 tap. What size drill will you use?
   a) 4.5 mm  
   b) 4.0 mm  
   c) 3.8 mm  
   d) 3.5 mm

17. Which coolant is used for drilling the aluminum job?
   a) Dry air  
   b) Kerosene  
   c) Soluble oil  
   d) Mineral oil

18. In a vernier micrometer, vernier scale is graduated on –
   a) Thimble  
   b) Spindle  
   c) Barrel  
   d) Frame

19. _______ is an operation of bevelling the end of a drilled hole.
   a) Hacksawing  
   b) Filing  
   c) Countersinking  
   d) Turning

20. The angle of countersink rivets are –
   a) 80°  
   b) 90°  
   c) 75°  
   d) 120°

21. The charge is fed into the blast furnace through the –
   a) Throat  
   b) Stack  
   c) Bosh  
   d) Tuyere

22. _______ are useful for heavy duty work.
   a) Countersink with pilot  
   b) Countersink with one flute  
   c) Countersink with two flutes  
   d) All of these
23. The point angle of twist drill depends upon the —
   a) Cutting speed
   b) Type of drilling machine
   c) Size of the drill
   d) Material to be drilled

24. ______ angle is the angle of flute.
   a) Helix
   b) Point
   c) Clearance
   d) Rake

25. Reasons for overheated drills —
   a) Cutting speed is too high
   b) Feed rate is too high
   c) Clearance angle is incorrect
   d) All of the above

26. Twist drills are designated by —
   a) Diameter
   b) Tool Type
   c) Material
   d) All of these

27. The material used for coating of electrode is called —
   a) Blander
   b) Flux
   c) Slag
   d) All of these

28. ______ is used to remove slags from welding joints.
   a) Chipping hammer
   b) Wire brush
   c) Welding hand screen
   d) Tongs

29. Helical grooves on body of reamers are known as —
   a) Flutes
   b) Face
   c) Heel
   d) Recess

30. Small flat surface in between cutting edge and the heel of a reamer is known as —
   a) Flutes
   b) Face
   c) Heel
   d) Land

31. Reduction in body diameter toward shank of reamer is known as —
   a) Flutes
   b) Face
   c) Heel
   d) Recess

32. Taper shank of reamer can be gripped by —
   a) Flutes
   b) Face
   c) Heel
   d) Shank

33. A screw thread is designated as 1" B.S.P. thread, in 1 inch B.S.P. thread what 1" indicates?
   a) Major diameter of thread
   b) Minor diameter of thread
   c) Pitch diameter of thread
   d) Hole diameter of pipe

34. The grain size of a grinding wheel is indicated by numbers, which range of grain size referred to as 'Very Fine'?
   a) 10 – 24
   b) 30 – 60
   c) 80 – 180
   d) 220 – 600
35. It is commonly observed that the face of a grinding wheel becomes shiny and smooth or glazed after some use due to one of the reasons stated below:
   a) Grade of wheel is too hard
   b) Abrasive of the wheel not suitable for the purpose
   c) Grain size is too coarse
   d) Structure of the wheel is too open

36. Which of the following symbols range of alphabet represent soft grain in grinding wheel?
   a) A – H
   b) I – P
   c) Q – T
   d) T – Z

37. Which of the following is correct range for grain number of grinding wheel for coarse grains?
   a) 220-600
   b) 80-180
   c) 30-60
   d) 10-24

38. What will be the result if the clearance angle in drill is increased?
   a) Poor wedging action
   b) Weak cutting edge
   c) Rough hole surface
   d) Increased point angle

39. A product is said to have the quality when?
   a) Its shape and dimensions are within the limits
   b) It appears to be very good
   c) It is fit for use
   d) The choice of material is right

40. How do you recognize a drill for soft metal?
   a) By the large helix angle
   b) By the small helix angle
   c) By the chisel edge angle
   d) By the point angle which is 90°

41. Presence of which material in a gray cast iron causes reduced ductility?
   a) Graphite
   b) Aluminum
   c) Coke
   d) Zinc

42. Which is closest to the purest form of the iron?
   a) Cast Iron
   b) Wrought Iron
   c) Pig Iron
   d) Steel

43. The relief angle given behind the cutting lips is called –
   a) Lip clearance angle
   b) Helix angle
   c) Rake angle
   d) Chisel edge angle

44. What is contained inside the well of cupola?
   a) Molten iron
   b) Solid iron
   c) Molten steel
   d) Solid steel

45. What is the range of efficiency of cupola?
   a) 20% to 40%
   b) 30% to 50%
   c) 40% to 60%
   d) 50% to 70%
46. What is the main source of high carbon steel material?
   a) Pig iron       b) Cast iron       c) White iron   d) Steel scrap

47. The product from blast furnace is called –
   a) Cast Iron     b) Wrought Iron  c) Pig Iron     d) Steel

48. The material of twist drill is generally –
   a) H.S.S.        b) Carbide steel  c) Diamond    d) Cast steel

49. Which of the following is not a material handling equipment?
   a) Cranes        b) Lifts         c) Tongs      d) Hoists

50. Which type of maintenance is not directly included in the total maintenance cost, but might be a component of total cost?
   a) Preventive    b) Breakdown    c) Predictive d) None of these

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