

1. Shrinkage allowance is made up by
  - a. Adding to external dimension
  - b. Subtracting from external and internal dimension
  - c. Subtracting from external and adding to internal dimension
  - d. Adding to external and subtracting from internal dimension \*
  
2. Increase of Carbon content in steel decreases the
  - a. Ultimate strength
  - b. Hardness
  - c. Ductility \*
  - d. Percentage of pearlite
  
3. Nitriding is a process for
  - a. Tempering
  - b. Normalizing
  - c. Case-hardening \*
  - d. Annealing
  
4. Size of shaping machine is specified by
  - a. Length of stroke \*
  - b. Size of table
  - c. Max. size of tool
  - d. H.P. of motor
  
5. Principle constituent of fuel are
  - a. Oxygen and Hydrogen
  - b. Carbon and Hydrogen \*
  - c. Sulphur and Hydrogen
  - d. Sulphur and Oxygen
  
6. Rake angle for brittle material like brass etc. is provided as
  - a. Zero \*
  - b. Negative
  - c. Positive
  - d. None of the above
  
7. Major insulation of a transformer is the insulation
  - a. Between the low-voltage winding and the core only
  - b. Between the low voltage winding and the high voltage winding
  - c. Both (a) and (b) \*
  - d. The turns of the windings
  
8. If the thickness of laminations is increased, then
  - a. The eddy current loss decreases
  - b. The eddy current loss increases \*
  - c. The hysteresis loss decreases
  - d. The hysteresis loss increases
  
9. Under commutation gives rise
  - a. sparking at the leading edge of the brush
  - b. sparking at the trailing edge of the brush \*
  - c. no sparking at all
  - d. parking at the middle of the brush

10. The dummy coil in d.c. machines is used to
- Eliminate the reactance voltage
  - Eliminate armature reaction
  - Bring about mechanical balance of armature \*
  - Eliminate harmonics developed in the machine
11. Two lamps of rating 100W, 250V and 60W, 250V are available. The resistance of the 100W lamp will be
- Same as 60W lamp
  - More than 60W
  - Less than 60W \*
  - Less than the sum of their resistances
12. A capacitor can be represented by a capacitance and a resistance in parallel. For a good capacitor, this parallel resistance is
- Very high \*
  - Very low
  - Low
  - None of these
13. What should be the order of addition of de oxidizer in steel making?
- Mn, Si, Al\*
  - Si, Mn, Al
  - Al, Mn, Si
  - all of the mentioned
14. Peritectic reaction is –
- $\alpha \rightarrow \gamma + \beta$
  - $L + \alpha \rightarrow \beta$ \*
  - $L \rightarrow \beta + \alpha$
  - $\gamma + \alpha \rightarrow \beta$
15. Which of the following is most ductile?
- low carbon steel
  - Aluminum\*
  - copper
  - micro alloyed steel
16. Recrystallization temperature for lead is
- room temperature \*
  - 327 °C
  - 100 °C
  - d. cryogenic temp.
17. Matte smelting is done for –
- Cu\*
  - Au
  - Al
  - Pb
18. Surface hardening of austenitic stainless steel is done by –
- carburization
  - nitriding\*
  - tempering
  - hardening
19. Diodes which operate by unipolar conduction are called :
- Varactor diode
  - varicap diode
  - Schottky diode \*
  - MOSFET
20. A thermistor is an electronic device whose resistance
- increases with rise in temperature
  - decreases with temperature \*
  - does not change with change of temperature
  - none of the above

21. The current flowing across a unbiased p-n junction are  
 a. Diffusion current    b. Drift current    c. both of them \*    d. none of them
22. Which of the following is a unilateral device  
 a. Resistor    b. diode\*    c. capacitor    d. none of the above
23. A sine wave voltage varies from zero to a maximum, of 200 V. What is the magnitude of the voltage at the instant of 30 degree?  
 a. 50 V    b. 82.8 V    c. 100 V \*    d. 172.3 V
24. During charging of a lead acid cell the sp.gr of the electrolyte  
 a. increases \*    b. decreases    c. remains constant    d. becomes zero.
25. With increase of temperature viscosity of a fluid  
 a. Remains constant    b. decreases  
 b. c. increases\*    d. may increase or decrease depending on the fluid
26.  $C_p - C_v$ , for an ideal gas is equal to  
 a.  $R^*$     b.  $R/2$     c.  $2R$     d.  $3R$
27. Limiting reactant in a chemical reaction decides the  
 a. rate constant    b. conversion\*  
 c. reaction speed    d. equilibrium constant
28. Which of the following is not a sulphur compound present in petroleum?  
 a. Thiophenes    b. Mercaptans\*  
 c. Sulphones    d. Pyroles
29. Nitrogen content of urea is  
 a. 10%    b. 46%\*    c. 80%    d. 94%
30. The absorption factor is defined as  
 a.  $\frac{L^*}{mG}$   
 b.  $\frac{G}{mL}$   
 c.  $\frac{mL}{G}$   
 d.  $\frac{LG}{M}$
31. The OH concentration in a solution having pH vale 3 is  
 a.  $10^{-3}$     b.  $10^{-10}$     c.  $10^{-11}$  \*    d.  $10^{-13}$
32. Stoke's equation is valid in the Reynolds number range  
 a. 0.01 to 0.1\*    b. 0.1 to 2    c. 2 to 10    d. 10 to 100
33. The average transitional kinetic energy with which a gas molecule is endowed is dependent on its  
 a. nature    b. size  
 c. absolute temperature\*    d. all of the mentioned



49. When  $T \rightarrow 0$ , for a perfect crystalline solid, which one of the following is true?

- a.  $\Delta H > \Delta G$       b.  $\Delta H < \Delta G$       c.  $\Delta H = \Delta G$  \*      d.  $\Delta H = \frac{1}{2} \Delta G$

50. The logarithm of mean activity coefficient of an electrolytic solution decreases with ionic strength ( $\mu$ ) as

- a.  $\mu^{1/2}$  \*      b.  $\mu$       c.  $\mu^{3/2}$       d.  $\mu^2$ .

## Answer Key

sl_no	ans
1	D
2	C
3	C
4	A
5	B
6	A
7	C
8	B
9	B
10	C
11	C
12	A

13	A
14	B
15	B
16	A
17	A
18	B
19	C
20	B
21	C
22	B
23	C
24	A
25	B

26	A
27	B
28	B
29	B
30	A
31	C
32	A
33	C
34	A
35	C
36	B
37	C
38	B

39	A
40	B
41	D
42	A
43	C
44	A
45	C
46	B
47	A
48	D
49	C
50	A