BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY

Unit Test-I (Shift:-I & II)

Programme: - Mechanical

Semester: - II Course: - **App. Science (22202)**

Course: Applied Chemistry(22202)

1) A naturally occurring metallic compounds called…….

a) Metalloids b) minerals

c) Matrix d) hard solids

2) The process of separating metals from their ores is known as

a) Magnetic separation b) metallurgy

c) Froth flotation d) concentration

3) The property which enables metals to be drawn into wire is known as

a) Malleability b) Tensile strength

c) Ductility d) hardness

4) Froth flotation method is applied for concentration of

a) Sulphide ore b) aluminum ore

c) Oxide ore d) Zinc ore

5) Flux is a substance which is used to remove……

a) Metal b) Gangue

c) ore d) Mineral

6) Pig iron is extracted from

a) Magnetite ore b) Haematite ore

c) Sinderite d) Feldspar

7) Function of coke in blast furnace is

a) To remove slag b) To reduce metal oxides

c) To control grade of pig iron d) Acts as iron bearing materials

8) In the extraction of copper from copper pyrites, iron is removed as….

a) $FeSO_4$ b) $FeSiO_3$

c) Fe_2O_3 d) Fe_3O_4

9) Molten Matte is a mixture og

a) Cu_2S+FeS b) Fe_2S + CuS

c) Cu_2O + FeS d) FeO + Cu_2O

10) In Purification of copper (refining of copper) anode is

a) Pure Cu b) Impure Cu

b) Pure carbon d) none of the these

11) A solder is an alloy of

a) Lead &Tin b) Zinc & Tin

c) Tin & antimony d) Tin & Copper

12) While making ornaments and coins of gold and silver hardness is increased by addition of

a) Cu b Fe

c) Zn d) Sn

13) Argillaceous materials contain…….

a) Calcium b) Lime

c) Alumina d) Iron

14) Refractory lining may be

a) Acidic only b) Basic only

c) Neutral only d) all of these

15) Commonly used lime in white washing is

a) White lime b) fat lime

c) Hydraulic lime d) quick lime

16) A ……..from which metals can be extracted is known as ores.

a) Metalloids b) minerals

c) Matrix d) hard solids

17) The process of separating metals from their ores is known as

a) Magnetic separation b) metallurgy

c) Froth flotation d) concentration

18) In magnetic separation, magnets are used to separate……

a) Ore & gangue b) Metal & minerals

c) Iron & steel d) Metal & gangue

19) Froth flotation method uses…….

a) Pine oil b) alcohol

c) Acid d) Alkali

20) Flux Used in blast furnace while melting iron ore is…..

a) Carbon b) oxygen

c) Lime stone d) coke

21) Pig iron is extracted from

a) Magnetite ore b) Haematite ore

c) Sinderite d) Feldspar

22) Function of coke in blast furnace is…..

a) To remove slag b) To reduce metal oxides

c) To control grade of pig iron d) Acts as iron bearing materials

23) Blister cupper is ……

a) Pure copper b) Impure copper

c) ore of copper d) Alloy of copper

24) Property of a metal to resist repeated shocks or vibrations without breaking is known as……

a) Weldability b) Toughness

c) Hardness d) Fatigue

25) Application of mild steel is……

a) To make thin soft wires, wire for ropes. b) In railway engineering works.

b) Wood working tools. d) Making gun parts.

26) A brass is an alloy of

a) Lead &copper b) Copper & zinc

c) Tin & Copper d) Tin & Copper

27) While making ornaments and coins of gold and silver hardness is increased by addition of

a) Cu b) Fe

c) Zn d) Sn

28) Gypsum is added to cement in order to

a) Prolong hydration b) increase strength after hydration

c) Decrease heat of hydration d) reduce curing time

29) Which is not basic refractory?

a) Cromemagnesite b) dolomite

c) Magnesite d) silicon carbide

30) Commonly used lime in white washing is

a) White lime b) fat lime

c) Hydraulic lime d) quick lime

Question Bank-AppliedPhysics(22202) (I scheme)

Unit test-1

Academic year:2017-2018 **Sem-2** **Course:ME**

Unit 1:(CO1)

1)The maximum stress the system is capable of withstanding is known as_____.

a) Breaking stress
b) Ultimate Stress
c) Working Stress
d) Tensile stress

2)The unit of Poission's Ratio is_____.

a) N/m^2
b) m^2/N
c) Nm^2
d)No unit

3) Cable of Lift elevator is the example of _____.

a)Longitudinal Stress
b) Volume Stress
c)Lateral stress
d)Shearing Stress

4) The force applied on body which is responsible for changing shape and size of body is called as_____.

a)Restoring Force
b)Deforming Force
c)Internal Force
d)Regaining Force

5) Longitudinal strain is defined as_____.

a)F/A
b)A/F
c)dl/L
d)L/dl

6)Shear strain is defined as_____

a)Force per unit area
b)Area per unit force
c)Product of Lateral displacement to distance from fixed layer
d)Ratio of Lateral displacement of layer to its distance from fixed layer

7) Bulk Modulus of elasticity is given by,_____

a)K=dv/V *dp

b)K=dv/(V*dp)

c)K=dp*dv*V

d)K=(dp*V)/dv

8) The portion in stress strain diagram which shows permanent elongation in the wire is called as_____

a)Yeild

b)Elastic limit

c)Set

d)Breaking point

9) Strain increases without increase in stress just like wire flows,this is called as ____.

a)Yeilding

b)Elastic limit

c)Set

d)Breaking point

10) Actual practical stress on the system is called as _____

a)Breaking Stress

b)Ultimate Stress

c)Working Stress

d)Tensile Stress

11) If two different wires of steel &aluminium of same dimensions are taken then_____

a)Elasticity of both wires will be Same

b)Elasticity of both wires will be different

c)Elasticity depends on what dimension it has

d)None of above

12) The extension produced in a wire due to a load is 3mm.The extension in a wire of same material andlength but half the radius will be_____

a)10mm

b)12mm

c)14mm

d)16mm

13) Four wires of same metal and same diameter are stretched by same load.Length of each wire is given below .Which of them will elongate least?

a)L=1m

b)L=1.5m

c)L=2m

d)L=2.5m

14) Calculate Poission's ratio if metal wire of length 3m & diameter 0.3mm is stretched by2mm & lateral contraction is $15X10^{-4}$mm.

a)0.25

b)0.5

c)0.75

d)1

15) A metal bar has a maximum stress is $9X10^8$ N/m^2 .If area of bar is $0.02m^2$,find maximum forace that bar can withstand___.

a)$0.18X10^9$ N/m^2 b) $0.18X10^6 N/m^2$

c) $0.18X10^7$ N/m^2 d) $0.18X10^8 N/m^2$

16) Unit of Thurst in MKS system is_____.

a) N/m^2 b)N

c) J d) J/m^2

17) Pressure at any point inside liquid depends on_____

a)Only Depth b)Only Liquid density

c)Only gravitational acceleration d)All of the above

18) When three holes of equal diameter are drilled in a water tank at the top of tank,at the middle of tank and at bottom of tank then the pressure will be _____

a)More at top b)More at MIddle

c)More at bottom d)Same at every Level

19)ByArchimede's Principle_____

a) Upthurst force=Loss of weight of body in liquid b) Upthurst force<Loss of weight of body in liquid

c) Upthurst force>Loss of weight of body in liquid d) None of these

20)Stoke's law states that Viscous Force experienced by a small metal sphere falling through viscous fluid is directly proportional to_____

a)Radius of metal sphere(r) b)Terminal Velocity(v)

c) Coefficient of viscosity(η) d)All of above

21) If sugar is dissolved in pure water them viscosity of net solution is_____

a)Less than Pure water b)Same as Pure Water

c)More than pure water d)None of these

22) An ice block of density 0.8gm/cm3 is floating on water of density 1gm/cm3.Fraction of volume of ice above water surface will be

a)0.2 b)0.4

c)0.6 d)0.8

23) A solid floats on water.Its 60% volume is inside water.Calculate density of solid(density of water=$1000kg/m^3$)

a) $600kg/m^3$ b) $300kg/m^3$

c) $900kg/m^3$ d)$1000kg/m^3$

24) The unit of coefficient of viscosity is____

a)Ns m^2 b) m^2/sN

c) Ns/m^2 d) m^2s/N

25) A air bubble of radius 1cmrises steadily through the solution of density 1.75X10^3kg/ m^3 at steady velocity of 0.35m/s. Calculate coefficient of viscosity.

a)1.08 Ns/m^2 b) 1.18 Ns/m^2

c) 1.02Ns/m^2 d) 1.25 Ns/m^2

26) Universal testing Machine is an example of_____

a)Destructive Testing Technique b) Non-Destructive testing Technique

c)Semi Destructive Testing d)None of these

27) After using the material using NDT technique, the material

a)can be used for intended purpose b) can be used for intended purpose with some correction

c)cannot be used for intended purpose d)none of these

28) Using NDT_____

a)Only Sample Testing is possible b)100% testing is possible

c)Depends on technique used d)none of these

29) Which one of the following is not a NDT technique?

a)Ultrasonic Testing b)Magnetic particle testing

c)Compression testing d)Radiographic Testing

30) Which one of the following is not a selection criterian for NDT technique?

a)Codes or standard requirement b)Specification of material to be tested

c)Manufacturing process of material d)Weight of material

31) Which one of the following is limitation of NDT technique?

a)material can be used for intended purpose b)Raw material can be tested to save money & time

c)100% eamination is possible d)Minimum two methods are required for complete analysis

32) Which one of the following is advantage of NDT technique?

a)Testing is possible during servicing of machine b)Testing charges are more

c)Only trained & certified persons are required d) Minimum two methods are required for complete analysis

Unit 2:(CO2)

33) Speed is a ____Quantity & velocity is a ____Quantity

a)Vector,Scalar b)Scalar,Vector

c)Scalar,Scalar d)Vector,Vector

34) Negative Acceleration is called as_____

a)Slow acceleration b)Retardation

c)Uniform acceleration d)Gravitational Acceleration

35) Acceleration is given by_____

a)Time/Change in velocity b)Change in velocityXtime

c) Change in velocity/timed) Change in velocity + time

36) Using usual symbols ,third equation of motion is_____

a)$v^2=u^2+2as$ b) $u^2=v^2+as$

c) $v^2=u^2+1/2as^2$ d) $v^2=u^2+2as^2$

37) Which of the following is not a equation of motion moving vertically upward against gravity_____

a)v=u-gt b)$s=ut-1/2gt^2$

c)$s=ut+1/2gt^2$ d) $v^2=u^2-2gs$

38) A ball is released from a height & falling freely down is an example of _____

a)Uniform displacement b) Uniform Velocity

c)Uniform Acceleration d)reatardation

39)If a car stands from rest & accelerated for 10 seconds at the time of $0.5m/s^2$,its final velocity will be__

a)0.05m/s b) 5m/s

c)50m/s d) 1.5m/s

40) 54 km/hr is equal to _____

a)15 m/s b)30m/s

c)45m/s d) 60m/s

41) A car moving with constant speed of 72km/hr , total distance covered in 10 sec will be_____

a)720m b)7.2m

c)100m d) 200m

42) If a ball is released freely from a certain height, the approximate distance covered by it in 1 sec will be,

a)15 m b)10m

c)5m d) 1m

43) A ball is released from terrace of building 80m.The time it will take to reach ground will be_____

a)1 sec b)2 sec

c)3 sec d) 4 sec

44) An object comes to rest from a velocity of 20m/s in a distance of 10 m.Acceleration will be_____

a)$10m/s^2$ b) $30m/s^2$

c) $-20m/s^2$ d) $-30m/s^2$

45) A body is said to be in motion,if it _____its position w.r.t_____with passage of_____

a)keeps,surrounding,time b) does not change,place.time

c) changes,surroundings,time d) None of these

46) The rate of change of velocity w.r.t time in a given direction is called as_____

a)Acceleration b) Displacement

c) Speed d) Velocity

47) The second equation of motion(kinematics) is given by _____

a)$s=ut+at^2$ b) $s=ut+1/2at$

c) $s=ut+1/2at^2$ d) $s=ut+2at^2$

48) The car starting from rest gains a velocity of 54km/hr in 15 sec, total distance covered in 10 sec will be_____

a) 5.4m b) 50m

c) 540m d) 100m

49) A ball is thrown vertically up.It falls back to ground(same spot)after 2 sec.The maximum height reaced by it will be _____

a)1m b) 5m

c) 10m d) 15m

50) A ball is thrown vertically upward with initial velocity 20m/s.The maximum height attained by ball will be

a)10m b) 20m

c) 30m d) 40m