TRACER,SOIL SURVEY AND SOIL CONSERVATION DEPARTMENT

EXAM DATE:13-01-2017

**1.What is the unit of surface tension in SI unit?**

A.Nm

B.N/m\*

C.N/m2

D.N/mm2

Ans:B

**2.Name the flow in which the fluid particles move along well defined path or** **stream line and all the stream lines are straight and parallel**

A.Turbulent flow

B.Rotational flow

C.Three dimension flow

D.Laminar flow\*

Ans:D

**3.The device used to measure the rate of flow of a fluid through a pipe line**

A.Venturi meter\*

B.Piezometer

C.Manometer

D.Diffential manometer

Ans:A

**4.Pitot tube is used to measure the-----of flows in pipe or channel**

A.Viscosity

B.Velocity\*

C.Pressure

D.Discharge

Ans:B

**5.The ratio between the actual velocity of a jet of liquid at vena contracta and the** **theoretical velocity jet is called**

A.Coefficient of contraction

B.Coefficient of discharge

C.Coefficient of velocity\*

D.None of the above

Ans:C

**6.The hydraulic machine which converts mechanical energy to hydraulic energy**

A.Turbines

B.Pumps\*

C.Pelton wheel

D.Inward radial flow turbines

Ans:B

**7.Which type of energy is available at the inlet of a impulse turbine?**

A.Kinetic energy\*

B.Pressure energy

C.Thermal energy

D.Kinetic and pressure energy

Ans:A

**8.Give an example for axial flow reaction turbine:**

A.Pelton turbine

B.Kaplan turbine\*

C.Francis turbine

D.None of the above

Ans:B

**9.The sum of suction head and delivery head of a centrifugal pump is known as**

A.Static head\*

B.Manometric head

C.Total head

D.Overall head

Ans:A

**10.The difference between the theoretical discharge and actual discharge of a** **reciprocating pump is known as**

A.Cavitation

B.Slip\*

C.Ideal discharge

D.Head losses

Ans:B

**11.In multi stage pump for discharging large quantity of liquid,the impeller are** **connected**

A.In series

B.In Inclined

C.In Parallel\*

D.In Any way

Ans:C

**12.The property by which a metal can be drawn into wires without breaking is** **known as**

A.Brittleness

B.Toughness

C.Malleability

D.Ductility\*

Ans:D

**13.The melting point of copper is----**

A.10800C\*

B.11800C

C.12800C

D.9800C

Ans:A

**14.When a solid is immersed in a liquid the upward thrust experienced by it then** **the resultant is called**

A.Floatation

B.Equilibrium

C.Buoyancy\*

D.Centre of gravity

Ans:C

**15.One British horse power is equal to ------watts**

A.735

B.746\*

C.750

D.735

Ans:B

**16.One joule is equal to**

A.106 ergs

B.107 ergs\*

C.108 ergs

D.109 ergs

Ans:B

**17.The ratio of stress and strain within elastic limit is known as**

A.Yield point

B.Factor of safety

C.Modulus of rigidity

D.Young’s modulus\*

Ans:D

**18.The quantity of heat required to turn one gram of a substance from solid to** **liquid state without any change in temperature is known as**

A.Latent heat of fusion\*

B.Latent heat of vaporization

C.Sensible heat

D.Super heat

Ans:A

**19.The fulcrum is in between the effort and load then the lever is called**

A.First order\*

B.Second order

C.Third order

D.None of the above

Ans:A

**20.The part of a structure above the ground level is called**

A.Basement

B.Plinth

C.Foundation

D.Super structure\*

Ans:D

**21.Which type of foundation is most suitable for bridges**

A.Pier

B.Raft

C.Pile\*

D.Strap

Ans:C

**22.The horizontal moulded projection provided near the top of a building is called**

A.Coping

B.Corbel

C.Cornice\*

D.Skirting

Ans:C

**23.Herring bone bond is commonly used for----**

A.Brick paving\*

B.Very thick wall

C.Partition wall

D.Footings

Ans:A

**24.The function of aggregates in concrete is to save as**

A.Binding material

B.Filler\*

C.Catalyst

D.All of the above

Ans:B

**25.Vicat’s apparatus is used to perform**

A.Fineness test

B.Soundness test

C.Consistency test\*

D.Compressive test

Ans:C

**26.The maximum particle size of the aggregate is**

A.2.5 mm

B.4.75 mm\*

C.5.85 mm

D.6.5 mm

Ans:B

**27.The development of first 28 days strength is an accuracy of the hydration of**

A.Dicalcium silicate

B.Tricalcium silicate\*

C.Tricalcium aluminate

D.Tetra calcium alumino ferrite

Ans:B

**28.In a simply supported alumino ferrite concrete beam the reinforcement is** **placed:**

A.Below the neutral axis\*

B.Above the neutral axis

C.At the neutral axis

D.Any one of the above

Ans:A

**29.The brick laid with its length parallel to the face of the -----**

A.Header

B.Soldier

C.Stretcher\*

D.Shiner

Ans:C

**30.If the depth is equal to or less than width,the type of foundation is------**

A.Shallow

B.Deep\*

C.Well

D.Pile

Ans:B

**31.Efflorescence is caused if---------**

A.The alkaline salt is present in the bricks

B.The clay used for making bricks containing pyrite

C.The water used for pugging the clay contains gypsum

D.All of the above\*

Ans:D

**32.What is the category of rock in granite?**

A.Sedimentary rock

B.Igneous rock\*

C.Metamorphic rock

D.Mountain rock

Ans:B

**33.The paints are coatings of fluid materials and they are applied over the surface** **of:**

A.Bricks and Stones

B.Timber and Metal\*

C.Glass and Rubber

D.Plastic and Aluminium

Ans:B

**34.Which walls are not subjected to the action of load of the structure directly?**

A.Load bearing walls

B.Cavity walls

C.Non load bearing walls\*

D.Partition walls

Ans:C

**35.A piece of sawn timber the dimensions of which does not exceed 5 cm either** **in breadth or in thickness is called:**

A.Strip

B.Batten

C.Plank\*

D.Cant

Ans:C

**36.Workability of a concretet can be improved by addition of:**

A.Iron

B.Sodium

C.Zinc

D.Sulphur\*

Ans:D

**37.What is generally used to measure the depth of excavation of foundation?**

A.Cross staff

B.Ranging rod

C.Steel tape\*

D.Dumpy level

Ans:C

**38.Granolithic concrete is composed of------**

A.Steel and Timber

B.Marble,Granite and Linoleum

C.Brick and Stone

D.Cement,Sand and specially selected aggregates\*

Ans:D

**39.M15 stands for:**

A.1:1:2

B.1:4:8

C.1:1 ½:3

D.1:2:4\*

Ans:D

**40.Which is 0.15% of the cross sectional area of concrete?**

A.Main reinforcement\*

B.Shear reinforcement

C.Cantilever

D.Simply supported

Ans:A

**41.The concrete slump is recommended for beams and slabs is:**

A.25 to 50 mm

B.30 to 125 mm

C.50 to 100 mm\*

D.60 to 150 mm

Ans:C

**42.Which one of the following is ferrous metal?**

A.Aluminium

B.Brass

C.Lead

D.Pig iron\*

Ans:D

**43.Shrinkage of concrete is directly proportional to:**

A.Cement content\*

B.Sand content

C.Aggregate content

D.Temperature of water

Ans:A

**44.Bronze is an alloy of:**

A.Copper and Zinc

B.Copper and Lead

C.Copper and Tin\*

D.Copper and Manganese

Ans:C

**45.The ratio between the ultimate stress and the working stress is termed as:**

A.Biastic limit

B.Factor of safety\*

C.Slenderness ratio

D.Poisson’s ratio

Ans:B

**46.Maximum stress permissible in the body without failure is called:**

A.Tensile stress

B.Working stress

C.Ultimate stress\*

D.Compressive stress

Ans:C

**47.Thickness of riveting shank depends upon:**

A.Thickness of plate

B.Depth of rivet

C.Nature of work

D.All of the above\*

Ans:D

**48.Which material has the highest value of Poisson’s ratio?**

A.Wood

B.Rubber\*

C.Copper

D.Steel

Ans:B

**49.Slenderness ratio has dimension of:**

A.M

B.m1

C.m2

D.No dimension\*

Ans:D

**50.Soils are arranged in face to face orientation.This type of soil structure is:**

A.Dispersed\*

B.Cohesive matrix

C.Honey comb

D.Flocculent

Ans:A

**51.The bending moment on a section is maximum where shear force is:**

A.Zero\*

B.Minimum

C.Maximum

D.Changing sign

Ans:A

**52.Traverse fillet welds are designed for:**

A.Shear strength

B.Compressive strength

C.Tensile strength\*

D.Bending strength

Ans:C

**53.The distance between the center of a rivel hole to the nearest edge of plate is** **called:**

A.Margin\*

B.Pitch

C.Barck pitch

D.Diagonal pitch

Ans:A

**54.From following which difect is due to fungi:**

A.Knot

B.Split

C.Mold

D.Druxinees\*

Ans:D

**55.SMPS stands for--------**

A.Switch Mock power Supply

B.Switch Mode power Supply\*

C.Signal Mode power supply

D.Switch Mode power SystemA  
Ans:B

**56.The section of the CPU that is responsible for performing mathematical** **calculations is:**

A.Memory

B.Register unit

C.Control unit

D.ALU\*

Ans:D

**57.Keyboard converts typed in character to---------**

A.ASCII\*

B.EBCIDIC

C.Decimal

D.Binary

Ans:A

**58.The memory which is programmed at the time of manufacturing is----------**

A.RAM

B.PROM

C.ROM\*

D.EPROM

Ans:C

**59.Which type of software is an operating system?**

A.System software\*

B.Application software

C.Firmware software

D.Utility software

Ans:A

**60.Which of the following programming language started from second** **generation?**

A.LISP

B.BASIC

C.C

D.COBOL\*

Ans:D

**61.Which component of computer is also considered as Heart?**

A.Monitor

B.Microprocessor\*

C.Scanner

D.Keyboard

Ans:B

**62.In banking and railways--------------computers are used**

A.Mini

B.Micro

C.Main Frame\*

D.Super

Ans:C

**63.What is the full form of CMOS?**

A.Content Metal Oxide Semiconductor

B.Complementary metal Oxide Semiconductor\*

C.Complementary Metal Oxygen Semiconductor

D.Complementary Metal Oscillator Semiconductor

Ans:B

**64.Which among the following is responsible for specifying address of a memory** **location?**

A.Address Bus\*

B.RAM

C.Control Bus

D.Hard disk

Ans:A

**65.Whose pen name in Nanthanar?**

A.M.K.Gopinathan Nair

B.P.K.Naryana Pilla

C.S.K.Pottakkad

D.P.C.Gopalan\*

Ans:D

**66.Who was the first woman Olympic Champion?**

A.Charlotte Cooper\*

B.Robina Maquimyar

C.Fariba Rezayee

D.Lalifa Al Maktoum

Ans:A

**67.The National Agricultural day:**A.August 16

B.December 23\*

C.December 10

D.March 22

Ans:B

**68.Who was the first person from depressed classes to be nominated to** **Travancore legislative assembly?**

A.Ayyankali\*

B.C.Krishnan

C.Dr.Palpu

D.Kumaran Ashan

Ans:A

**69.Who had started the concept of ‘Misra Bhojanam’?**

A.Pampady John Joseph

B.Mampuram Thanyal

C.Sahodaran Ayyappan\*

D.P.Krishna Pillai

Ans:C

**70.The New Education Policy was introduced by:**

A.Rajeev Gandhi\*

B.Jawaharlal Nehru

C.Indira Gandhi

D.Motilal Nehru

Ans:A

**71.Who got Jimmy George Foundation award in 2015?**

A.Anju Boby George

B.Tintu Luka\*

C.K.M.Beenamol

D.P.T.Usha

Ans:B

**72.Who got Jimmy George Foundation award in 2015?**

A.Anju Boby George

B.Tintu Luka\*

C.K.M.Beenamol

D.P.T.Usha

Ans:B

**73.’Give me blood in turn I will give you Freedom’who declared this word?**

A.Subhash Chandra Bose\*

B.Rash Bihard Bose

C.Bala Gangadhara Tilak

D.Gopala Krishna Gokhale

Ans:A

**74.Among the below which is the second experiment of Mahatma Gandhi?**

A.Non-Cooperation Movement

B.Kheda Satyagraha\*

C.Champaran Satyagraha

D.Civil Disobedience Movement

Ans:B

**75.Which education commission is known as University Education Commission?**

A.Dr.S.Radhakrishna Commission

B.Dr.A.Lakshmana Swami Mudaliar Commission

C.Dr.S.Kothari Commission

D.Woods Despatch\*

Ans:D

**76.Ghadar party founded by:**

A.Sohan Sing Bhakan

B.Tharaknath Das

C.Lala Hardayal\*

D.V.D.Savarkar

Ans:C

**77.The Headquarters of World Organization of Scout Movement:**

A.England

B.Geneva\*

C.New York

D.Italy

Ans:B

**78.Who got the J.C.Daniyel Award in 2014?**

A.I.V.Sasi\*

B.M.T.Vasudevan Nair

C.Jose Prakash

D.J.Sasikumar

Ans:A

**79.Who is the Revenue Minister of Kerala?**

A.V.S.Sunil Kumar

B.P.Thilothaman

C.E.Chandrasekharan\*

D.A.C.Moideen

Ans:C

**80.Who was the founder of Araya Samajam?**

A.Pandit Karuppan\*

B.Swami Vagbhatananda

C.Ayyathan Gopalan

D.Dr.Palpu

Ans:A

**81.The revolt of 1857 was described as the first Indian War of Independence by:**

A.VD Savarkar\*

B.SN Sen

C.RC Majumdar

D.RC Dutt

Ans:A

**82.Ustad Mansur was a famous painter in the region of:**

A.Humayun

B.Akbar

C.Babar

D.Jahangir\*

Ans:D

**83.Under whose leadership was the All India Muslim league set up?**

A.Sir Sayyid Ahamed Khan

B.Aga Khan\*

C.Mohammed Ali Jinnah

D.Shoukkath Ali

Ans:B

**84.NITI Aayog(National Institution for Transforming India)formed on:**

A.January 26,2015

B.January 1,2014

C.January 1,2016

D.January 1,2015\*

Ans:D

**85.The theoretical thermal efficiency of an air cycle is known as:**

A.Thermal efficiency

B.Air standard efficiency\*

C.Actual thermal efficiency

D.Indicated thermal efficiency

Ans:B

**86.Which cycle consists two adiabatic and two constant volume process?**

A.Diesel cycle

B.Carnot cycle

C.Otto cycle\*

D.None of the above

Ans:C

**87.What is the reason for a big size fly wheel that is used in four stroke engine:**

A.One power stroke for two revolution of the crank shaft\*

B.One power stroke for every revolution of the crank shaft

C.One power stroke for every half revolution of the crank shaft

D.None of the above

Ans:A

**88.In plunger type fuel injection pump,what movement of the plunger only** **control the quantity of fuel supply**

A.Upward-downward movement

B.Upward movement only

C.Downward movement only

D.Rotational movement\*

Ans:D

**89.The ratio of heat equivalent of indicated power to the heat energy supplied by** **fuel is known as:**

A.Indicated thermal efficiency\*

B.Mechanical efficiency

C.Brake thermal efficiency

D.Relative efficiency

Ans:A

**90.Atmospheric pressure at mean sea level is measured as:**

A.1.01325 bar\*

B.1.52333 bar

C.2.01325 bar

D.1.11345 bar

Ans:A

**91.Which law states that “There is a definite limit to the amount of mechanical** **energy from a given quantity of heat energy”**

A.Zeroth law of thermodynamics

B.First law of thermodynamics

C.Second law of thermodynamics\*

D.None of the above

Ans:C

**92.The ratio between calorific value of fuel and calorific value of carbon is known** **as:**

A.Total calorific value\*

B.Carbon value

C.Net calorific value

D.Theoretical value

Ans:A

**93.The algebraic sum of internal kinetic and potential energy of molecules of a** **system is known as:**

A.Energy in transition

B.Total energy

C.Internal energy\*

D.Enthalpy

Ans:C

**94.Which one is used to compare the performance of various reciprocating** **compressors?**

A.Isothermal efficiency

B.Adiabatic efficiency\*

C.Compressor efficiency

D.Mechanical efficiency

Ans:B

**95.Name the heat treatment process used to achieve the desirable properties of** **ceramic materials:**

A.Firing\*

B.Peening

C.Case hardening

D.Tempering

Ans:A

**96.The capacity to absorb energy elastically is known as:**

A.Stiffness

B.Toughness

C.Resilience\*

D.Hardness

Ans:C

**97.The unit of magnetic flux density:**

A.Weber\*

B.N/M2

C.Tesla

D.Ohm

Ans:A

**98.What is TMT steel?**

A.Tungsten,manganese,thoriated steel

B.Thermo magnetic treated steel

C.Tungston,magnesium,thoriated steel

D.Thermo mechanical treated steel\*

Ans:D

**99.In which cast iron,the carbon exists in the form of free graphite?**

A.Gray cast iron\*

B.White cast iron

C.Malleable cast iron

D.None of the above

Ans:A

**100.The ratio between dynamic viscosity and density of fluid is known as:**

A.Actual viscosity

B.Kinematic viscosity\*

C.Theoretical visocosity

D.Potential viscosity

Ans:B