

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.1080°C*

B.1180°C

C.1280°C

D.980°C

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.Stretchers*

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

DSimply 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 rivet 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'?

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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 Bobby George

B.Tintu Luka*

C.K.M.Beenamol

D.P.T.Usha

Ans:B

72.Who got Jimmy George Foundation award in 2015?

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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?

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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

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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