

TRACER,SOIL SURVEY AND SOIL CONSERVATION(THRISSUR,KOZHIKODE)

EXAM DATE:23-11-2016

1.The dynamic viscosity of most of the gases-----with rise in temperature

- A.Increases*
- B.Decreases
- C.Does not change significantly
- D.None of these

Ans:A

2.Buoyant force is-----

- A.Resultant of up thrust and gravity forces acting on the body
- B.Resultant force on the body due to the field surrounding it
- C.Equal to the volume of liquid displaced by the body*
- D.Resultant of static weight of body and dynamic thrust of liquid

Ans:C

3.The type of flow in which the velocity of every particle varies from point to point ,or every instant,in direction and magnitude is called as:

- A.Laminar flow
- B.Uniform flow
- C.Steady flow
- D.Turbulent flow*

Ans:D

4.The point in the immersed body through which the resultant pressure of liquid may be taken to act is known as

- A.Centre of buoyancy
- B.Metacentre*
- C.Centre of gravity
- D.Centre of pressure

Ans:B

5.The condition at which a piezometer cannot be used:

- A.Velocity is high
- B.Pressure difference is low
- C.Fluid is highly viscous
- D.Fluid in the pipe is a gas*

Ans:D

6.-----changes with coefficient of discharge of an orifice

- A.Reynold's number*
- B.Weber number
- C.Froude number
- D.Mach number

Ans:A

7.Bernoulli's equation cannot be applied when the flow is:

- A.Upsteady

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- B.Rotational
- C.Turbulent*
- D.All of the above

Ans:C

8.A body is placed inside a tank.If one meter water column is present above the object,what will be the pressure acting upon it?

- A.1 Pa
- B.9810 Pa*
- C.981 Pa
- D.98.1 Pa

Ans:B

9.Which among the flowing possesses highest density?

- A.Carbon tetrachloride*
- B.Air
- C.Glycerin
- D.Castor oil

Ans:A

10.-----is a regular shaped opening on one side of the liquid vessel provided for quantity measurement,with the liquid surface kept below the top edge of it.

- A.Orifice
- B.Weir

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C.Notch*

D.None of these

Ans:C

11.The discharge through right angled notch,if the cd is 0.6,will be-----

A.4.171 H^{5/2}

B.1.417 H^{5/2}*

C.0.417 H^{5/2}

D.7.141 H^{5/2}

Ans:B

12.The top of weir is known as:

A.Sill or crest*

B.Orifice

C.Nappe or van

D.None of these

Ans:A

13.Mathematically,the theoretical velocity of jet at vena contract is:

A.H Square root of 2 g

B.2g Square root of H

C.2gH

D.Square root of 2gH*

Ans:D

14.The hammer blow effect occurs in pipes due to-----

- A.The flow of liquid gradually brought to rest by closing the valve
- B.The excessive leakage
- C.Bursting under high pressure of liquid
- D.Sudden stopping of flow*

Ans:D

15.Impulse turbine may be utilized at streams having-----

- A.High discharge
- B.High head*
- C.Low head
- D.Medium head

Ans:B

16.The ratio of quantities of liquid discharged from pump to that passing through impeller at unit time is known as-----

- A.Mechanical efficiency
- B.Overall efficiency
- C.Volumetric efficiency*
- D.Manometric efficiency

Ans:C

17.The percentage of power saving may be attained in a single acting reciprocating pump by the installation of an air vessel is:

- A.48.8%

B.78.4%

C.84.4%*

D.39.2%

Ans:C

18.For the stability of a floating body,under the influence of gravity alone,which of the following is true?

A.Metacenter should be below centre of gravity

B.Metacenter should be above center of gravity*

C.Metacenter and center of gravity must lie on the same horizontal line

D.Metacenter and center of gravity must lie on the same vertical line

Ans:B

19.The property of material which helps in coining,ornament works and forging is:

A.Plasticity*

B.Ductility

C.Elasticity

D.Malleability

Ans:A

20.-----of the thermosetting plastics can be irreversibly formed into shape,under heat and pressure.

A.Some

B.None

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C.All*

D.None of these

Ans:C

21.In a reciprocating IC engine,the gudgeon pin forms the link between

A.Piston and big end of connecting rod

B.Piston and small end of connecting rod*

C.Connecting rod and crank

D.Big end and small end

Ans:B

22.The ratio of Actual thermal efficiency to the Air standard efficiency gives:

A.Mechanic efficiency

B.Actual air standard efficiency

C.Relative efficiency*

D.Theoretical thermal efficiency

Ans:C

23.The efficiency of diesel cycle is same as:

A.Otto cycle

B.Stirling cycle*

C.Carnot cycle

D.Ericsson cycle

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Ans:B

24.For the same compression ratio and heat input, arrange the efficiencies of various cycles in decreasing order:

A.Otto,Dual Diesel*

B.Otto,Diesel,Dual

C.Diesel,Otto,Dual

D.Dual,Diesel,Otto

Ans:A

25.The major loss in a CI engine is:

A.Direct heat loss

B.Friction loss

C.Pumping loss

D.Loss due to incomplete combustion*

Ans:D

26.Advantage of gaseous fuel is that:

A.It can be stored easily

B.It can mix easily with air*

C.It can displace more air from the engine

D.All of the above

Ans:B

27.Octane number of iso-octane is:

A.0

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B.96

C.69

D.100*

Ans:D

28.The lean air mixture is required during:

A.Cruising*

B.Idling

C.Starting

D.Accelerating

Ans:A

29.Modern carburetors provide the correct quality of air-fuel mixture during:

A.Starting

B.Idling

C.Cruising

D.All conditions*

Ans:D

30.Common rail injection system uses injection pressure of the order:

A.100-200 bar

B.200-400 bar

C.400-600 bar

D.1500 bar*

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Ans:D

31.A wall of length 4 m,height m and thickness 0.4 m,has the inner wall surface at 140 oC and that the outer at 20 oC.If the thermal conductivity of wall material is -0.85 W/mK,the temperature at 10 cm from the inner wall is:

A.120 oC

B.90 oC

C.110 oC*

D.80 oC

Ans:C

32.Convective heat transfer is quantified by:

A.Fourier's law

B.Newton's law*

C.Stefan-Boltzman law

D.Kirchhoff's law

Ans:B

33.For a black body:

A.Absorption is maximum

B.Radiation is maximum

C.Reflection is zero

D.All the above*

Ans:D

34.A gray body is a :

- A.Ordinary body*
- B.Opaque body
- C.Black body
- D.White body

Ans:A

35.Select the positive displacement compressor:

- A.Roots blower
- B.Vane blower
- C.Reciprocating compressor
- D.All the above*

Ans:D

36.When equal and opposite forces applied to a body,tend to elongate it, the stress to produced is called

- A.Shear stress
- B.Compressive stress
- C.Tensile stress*
- D.Transverse stress

Ans:C

37.The property of a material by which it can be drawn,due to tension to a smaller section is called:

- A.Plasticity

B.Ductility*

C.Elasticity

D.Malleability

Ans:B

38.Factor of safety is the ratio of:

A.Yield stress and working stress*

B.Tensile stress and working stress

C.Compressive stress and working stress

D.Bearing stress and yield stress

Ans:A

39.The shape of the bending moment diagram over the length of a beam,carrying a uniformly distributed load is always:

A.Linear

B.Parabolic*

C.Cubical

D.Circular

Ans:B

40.A beam is said to be of uniform strength if

A.B.M.is same throughout the beam

B.Shear stress is same throughout the beam

C.Deflection is same throughout the beam

D.Bending stress is same at every section along it's longitudinal axis*

Ans:D

41.The ratio of the effective length of a column and minimum radius of gyration of it's cross-sectional area,is known as:

- A.Buckling factor
- B.Slenderness ratio*
- C.Crippling factor
- D.None of these

Ans:B

42.Struts are load carrying members of a frame structure which are subjected to:

- A.Axial tension loads
- B.Axial compressive loads*
- C.Torsional loads
- D.Transverse loads

Ans:B

43.The portion of a brick cut across the width is called:

- A.Closer
- B.Half brick
- C.Bed
- D.Bat*

Ans:D

44.A beam is defined as a structural member subjected to

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- A.Axial loading
- B.Transverse loading*
- C.Axial and transverse loading
- D.None of the above

Ans:B

45.Long column is one:

- A.Which is more than 3 m long
- B.Whose lateral dimension is less than 25 cm
- C.Which is free at it's top
- D.Which has a ratio of effective length to least lateral dimension more than 15*

Ans:D

46.When two plates are placed end to end and are joined by cover plates,the joint is known as:

- A.Lap joint
- B.Butt joint
- C.Chain riveted lap joint
- D.Double cover butt joint*

Ans:D

47.The gross diameter of a rivet is the diameter of

- A.Cold rivet measured before driving
- B.Rivet measured after driving*
- C.Rivet hole

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D.None of the above

Ans:B

48.Side welds carry:

A.Shear stresses only*

B.Tensile stresses only

C.Both shear and tensile stresses

D.None of the above

Ans:A

49.An imaginary line along which rivets are placed is known as:

A.Rivet line

B.Gauge line*

C.Back line

D.All of the above

Ans:B

50.Which one of the following is the mode of failure in fillet weld material?

A.Tension

B.Shear*

C.Bearing

D.Crushing

Ans:B

51.Sandstone is:

- A.Sedimentary rock*
- B.Metamorphic rock
- C.Igneous rock
- D.Volcanic rock

Ans:A

52.Laterite is:

- A.Volcanic rock
- B.Argillaceous rock*
- C.Calcareous rock
- D.Silicious rock

Ans:B

53.The hardest rock is:

- A.Marble
- B.Diamond*
- C.Talc
- D.Quartz

Ans:B

54.The minimum compressive strength of a 1st class brick should be

- A.75 kg/cm²
- B.90 kg/cm²

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C.100 kg/cm²*

D.120 kg/cm²

Ans:C

55.For one cubic meter of brick masonry.number of bricks required is:

A.400

B.425

C.450

D.500*

Ans:D

56.The commonly used lime in white washing is:

A.White lime

B.Fat lime*

C.Hydraulic lime

D.Quick lime

Ans:B

57.Good quality cement contains higher percentage of:

A.Tri-calcium silicate*

B.Di-calcium silicate

C.Tri-calcium silicate

D.Tetra-calcium alumina ferrite

Ans:A

58.Soundness test of cement is carried out to determine:

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- A.Quantity of free lime*
- B.Ultimate strength
- C.Durability
- D.Initial setting

Ans:A

59.A well seasonal timber may contain moisture up to:

- A.4% to6%
- B.6% to 8%
- C.8% to 10%
- D.10% to 12%*

Ans:D

60.Veneering means:

- A.Carving out designs on timber planks
- B.Chemically treating timber planks
- C.Thick layer of superior wood glued to inferior wood*
- D.Thin layer of superior wood glued to inferior wood

Ans:C

61.Most commonly used solvent in oil paint is:

- A.Petroleum
- B.Spirit
- C.Coal-tar

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D.Turpentine*

Ans:D

62.Spirit varnish generally consist of

A.Oil,wax and resin

B.Alcohol,wax and turpentine

C.Pigment and synthetic resin

D.Spirit and shellac*

Ans:D

63The process of proper and accurate measurement of concrete ingredients for uniformity of proportion is known as:

A.Grading

B.Curing

C.Mixing

D.Batching*

Ans:D

64.M100 grade of concrete approximates:

A.1:3:6 mix*

B.1:1:2 mix

C.1:2:4 mix

D.1:1:5:3 mix

Ans:A

65.The stretcher bond is generally used in:

- A.Half brick wall*
- B.Simple brick wall
- C.1 1/2 brick wall
- D.Arches

Ans:A

66.The type of bond in which every course contains both headers and stretches is called:

- A.English bond
- B.Flemish bond*
- C.Russian bond
- D.Mixed bond

Ans:B

67.Spacing of stirrups in a rectangular beam is:

- A.Kept constant throughout the length
- B.Decreased towards the center of the beam
- C.Increased at the center of the beam*
- D.Increased at the ends

Ans:C

68.The distance between the center of adjacent rivets in the same row is called:

- A.Pitch*

B.Lap

C.Gauge

D.Staggered pitch

Ans:A

69.A beam is said to be of uniform length,if:

A.B.M.is same throughout the beam

B.Shear stress is same throughout the beam

C.Deflection is same throughout the beam

D.Bending stress at every section along it's longitudinal axis*

Ans:D

70.A bending moment may be defined as

A.Arithmetic sum of the moments of all the forces on same side of the section

B.Arithmetic sum of the forces on either side of the section

C.Arithmetic sum of the moments of all the forces on either side of the section*

D.None of the above

Ans:C

71.Second generation computers used-----Technology

A.Integrated Circuits

B.Transistors*

C.Vacuum Tubes

D.Microprocessor

Ans:B

72.The type of computers used to measure continuous quantities are-----

- A.Hybrid Computers
- B.Digital Computers
- C.Analog Computers*
- D.PCs

Ans:C

73.Which is an example of non-impact printer?

- A.Inkjet Printer*
- B.Dot matrix Printer
- C.Daisy Wheel Printer
- D.Drum Printer

Ans:A

74.The unit that controls function of CPU is-----

- A.Arithmetic Logical Unit
- B.Control Unit*
- C.Memory
- D.ROM

Ans:B

75.An example of Secondary Storage device is -----

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A.Hard disk*

B.ROM

C.RAM

D.PROM

Ans:A

76.Which is an input device?

A.Printer

B.Keyboard*

C.Plotter

D.None of the above

Ans:B

77.Physical components which constitute a computer is known as:

A.Hardware*

B.Software

C.Assembler

D.Interpreter

Ans:A

78.The process of loading Operating System into the memory of computer is called:

A.Sorting

B.Debugging

C.Merging

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D.Booting*

Ans:D

79.Example for an operating system is-----

A.COBOLE

B.BASIC

C.WINDOWS*

D.C++

Ans:C

80.An example of output device is----

A.Mouse

B.Light Pen

C.Scanner

D.Monitor*

Ans:D

81.Who is known as father of gynecology?

A.Christian Bernard

B.Harriet Washington

C.James Marion Sims*

D.Anarcha Samuel

Ans:C

82.According to RNI report 2015 which is the largest circulated single edition English newspaper in India?

- A.Hindustan Times*
- B.Times of India
- C.The Hindu
- D.The Indian Express

Ans:A

83.The first Indian MNC to be enlisted in the Fortune 500 table of the world's biggest companies:

- A.Tata
- B.Birla
- C.Reliance*
- D.Hinduja

Ans:C

84.Operation Sophia a naval operation against human smugglers and traffickers is initiated by:

- A.CN
- B.UN
- C.UWAC
- D.EU*

Ans:D

85.The first book on Svetlana Alexiewich,the 2014.Nobel Prize winner for literature is:

- A.War's Unwomanly Face*
- B.Voices from Chernobyl
- C.Zinky Boys
- D.The Last Witness

Ans:A

86.The anti-biotic drug Colistin which is used against superbugs has serious side effect as it is:

- A.Neurotoxic
- B.Hemotoxic
- C.Mycotoxic
- D.Nephrotoxic*

Ans:D

87.The United Nations Framework Convention on Climate Change mandates that each member country should prepare colmmunicate and maintain a Nationally Determined Contribution Report in every-----

- A.3 year cycle
- B.4 year cycle
- C.5 year cycle*
- D.6 year cycle

Ans:C

88.The United Nations Framework Convention on Climate Change 2015 was held at:

- A.London
- B.Paris*
- C.Geneva
- D.Vatican

Ans:B

89.The state having the highest number of publications

- A.Uttar Pradesh*
- B.Maharashtra
- C.Delhi
- D.Tamil Nadu

Ans:A

90.The language in which the highest number of publications in India:

- A.Bengali
- B.Marathi
- C.English
- D.Hindi*

Ans:D

91.Which is the country outside Asia to have Hindi as their official language?

- A.Fiji*

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B.Solomon Islands

C.Kiribati

D.Micronesia

Ans:A

92.According to Article 348(1)the language in the Supreme Court and in High courts and for Acts,Bills etc should be:

A.Hindi

B.English*

C.Hindi in Supreme Court and the official language of the state where the High Court belongs to

D.Hindi or English in SC and the official of the state where the High Court belongs to

Ans:B

93.The article which states the law related to water disputes of inter-state rivers or river valleys

A.Article 259

B.Article 260

C.Article 261

D.Article 262*

Ans:D

94.Mahatma Gandhi Sethu is built across the river

A.Ganga*

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B.Yamuna

C.Sarayu

D.Brahmaputra

Ans:A

95.Krishnadyasan who formed Pulaya Mahajana Sabha later converted to Christian faith seeking equality.He received the name -----after conversion

A.T.C.Mathai

B.C.K.John*

C.C.J.Joy

D.K.C.Roy

Ans:B

96.Which among the following newspapers is not edited by K.Ramakrishna Pillai?

A.Malayali

B.Kerala Darpanam

C.Kerala Sanchari*

D.Keralan

Ans:C

97.The country which introduced the digital money ATM for internet based business

A.Australia

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B.Canada*

C.USA

D.India

Ans:B

98.CRI Tamil radio is operated in:

A.Japan

B.China*

C.Malasia

D.Indonesia

Ans:B

99.Which of the following is a gesture recognition application for PCs?

A.Win 10

B.Android

C.Flutter*

D.Ubuntu 13

Ans:C

100.Who coined the word SENSEX?

A.Nirmal Verma

B.Harshad Metha

C.Dileep Chabria

D.Deepak Mohani*

Ans:D

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