ASSISTANT PROFESSOR(IT)ENGINEERING COLLEGES

EXAM DATE:28-10-2016

1.What reflects the quintessence of the constitution?

A.Fundamental Rights

B.The preamble*

C.Directive Principles

D.Fundamental Duties

Ans:B

2.Which are the articles dealing with the Centre-State Relations

A.Articles 245 to 263*

B.Articles 200 to 215

C.Articles 145 to 153

D.Articles 295 to 313

Ans:A

3.What is the subject matter of articles 346 and 347?

A.Right to Property

B.Appointment of Judges of Right Courts

C.Official language or languages of a State*

D.Public Service Commission

Ans:C

4.Which article provides a guaranteed remedy for the enforcement of fundamental rights?

A.Article 32*

B.Article 23

C.Article 226

D.Article 14

Ans:A

5.The Central Government has been created the National Green Tribunal on:

A.29th November 2010

B.24th October 2009

C.12th November 2011

D.18th October 2010*

Ans:D

6.In which year Samkshepa Vedartham,The first book in Malayalam was published?

A.1872

B.1847

C.1772*

D.1782

Ans:C

7.Ayyankali organized the first planned peasant strike in Kerala at Venganoor in:

A.1900

B.1909*

C.1910

D.1904

Ans:B

8.List out the odd one from the following options

A.Sree Narayana Guru

B.Madan Asan

C.Raman Pillai

D.Vaikunda Swamigal*

Ans:D

9.Who authored the work Ananda Sutra?

A.Brahmananda Sivayogi*

B.Sree Narayana Guru

C.Vaikunda Swamigal

D.Ayyankali

Ans:A

10.Who was the martyr of Paliyam Satyagraha?

A.K.G.Velayudhan

B.A.G.Velayudhan*

C.I.C.Chacko

D.Prakash

Ans:B

11.Who wrote the pamphlet San-us-Sabah?

A.Veliyankot Umar Qazi

B.Sayyid Sanaullah Makti Thangal

C.Vakkam Moulavi*

D.Hamadani Thangal

Ans:C

12.In which years Kumara Guru was nominated to the Sri Mulam Popular Assembly?

A.1920 and 1921

B.1922 and 1923

C.1921 and 1930

D.1921 and 1931*

Ans:D

13.What was the name of the Madras Governor,who ordered the Travancore govt.to issue orders for permitting the Channar women to wear jacket and pinafore?

A.Lord Huntington

B.Colonel Hitchcock

C.Lord Baily

D.Lord Haris*

Ans:D

14.The first woman Chief Secretary of Kerala

A.K.O.Aysha Potti

B.K.K.Usha

C.Pathma Ramachandran*

D.V.S.Ramadevi

Ans:C

15.Who was the founder of Sree Ramadasa Asramam?

A.Sree Neelakanda Gurupadar*

B.Swami Vivekananda

C.Sree Narayana Guru

D.Pazhoor Raman Chennan

Ans:A

16.The founder of Sabari Asram in Palakkad?

A.Kumaran Asan

B.Ananda Shenoy

C.T.R.Krishnaswamy*

D.Pandit Karuppan

Ans:C

17.The first female Prime Minister of Greece?

A.Alexix Tsipras

B.Vassiliki Thanon*

C.Neela Vaswani

D.Svetlana Alexievich

Ans:B

18.Who won the ‘Global Indian of the Year’award?

A.Narendra Modi

B.Sachin Tendulkar

C.Aravind Kejrival
D.Aishwarya Rai Bachachan*

Ans:D

19.Who won the Nobel Prize 2015 in Economics?

A.Carli Lloyd

B.Angus Deaton*

C.Nadine Kefler

D.Aziz Sanca

Ans:B

20.Who won the ‘Man of the Match’award in the final match of the ICC World Twenty 20 2016?

A.M.Samuels*

B.D.Bravo

C.C.Gale

D.A.Russel

Ans:A

21.If 1,2,3 are the eigen values of a matrix A,then the eigen values of $(A-4I)^2$ are:

A.-7 ,-12,-15

B.10,4,1

C.9,4,1*

D.4,4,2

Ans:C

22.The value of the integral

(Symbol) 0 to alpha $(e^{-2t}\sin^2 t)/t$ is

A.ln5/4

B.ln2/3*

C.ln2/2

D.I/4

Ans:B

23.The homogenous linear differential equation if its solutions are $e^{2x}, xe^{2x}, x^2e^{2x}$ is:

$Y'''+Ay''+By'-8y=0$ where A and B are

A.6,-12

B.-6,12*

C.6,12

D.2,2

Ans:B

24.The following is not a simple pole of the function cot pie $z/(z-0.75)^2$:

A.0.75*

B.0

C.-1

D.20

Ans:A

25.The coefficient a_n in the Fourier cosine series expansion of the function $f(x)=(x-1)^2$ in interval $0<x<1$ is:

A.$-4/n^2pie^2$

B.$2/n^2pie^2$

C.$2/n^2pie^2$

D.$4/n^2pie^2$*

Ans:D

26.Centre of gravity of a right circular cone of base radius r and height h from the base is:

A.3/4 h

B.1/4 h*

C.3/8 h

D.1/8 h

Ans:B

27.What is the maximum weight that can be lowered by a person who can exert a 500 N pull a rope if the rope is wrapped 2 ½ turns around a horizontal spur?

Coefficient of friction between spur and rope is 0.3:

A.4.5 N

B.45 N

C.556.59 N

D.55659 N*

Ans:D

28.What is the length of a Surveyors chain?

A.33 ft

B.66 ft*

C.33 m

D.66 m

Ans:B

29.R.L.of a factory floor is 100.00,Staff reading on the floor is 5.62 ft.and the staff reading when the staff is held inverted with bottom touching the tie beam of the roof truss is 1016 ft.What is the height of the tie beam above the floor?

A.15.78 ft*

B.115.78 ft

C.4.54 ft

D.104.54 ft

Ans:A

30.The horizontal distance between the vertical joints in successive courses in brick work is called:

A.Perpends

B.Lap*

C.Arries

D.Closer

Ans:B

31.Knocking in a spark ignition engine is promoted by:

A.A short flame travel length

B.Normally at the beginning of the combustion process

C.Increased clearance volume of cylinder

D.Reduced turbulance of the fuel-air mixture during combustion*

Ans:D

32.Centrifugal pumps operating in series will result in:

A.Higher discharge

B.Reduced power consumption

C.Higher head*

D.Low speed operation

Ans:C

33.A good refrigerant should have:

A.High COP and high freezing point

B.High operating pressures and low freezing point

C.High latent heat of vaporization and low freezing point*

D.High specific volume and high latent heat of vaporization

Ans:C

34.In sheet metal blanking,shear is provided on punches and dies so that

A.Press load is reduced*

B.Good cut edge is obtained

C.Warping of sheet is minimized

D.Cut blanks are straight

Ans:A

35.A curve generated by a fixed point on the circumference of a circle which rolls without slipping on the outer side of a fixed circle is known as:

A.Hypocycloid

B.Epicycloid*

C.Involute

D.Cycloid

Ans:B

36.Direction of dynamically induced EMF can be found by:

A.Maxwell's cork screw rule

B.Flemings Right Hand rule*

C.Flemings Left Hand rule

D.Coulomb's law

Ans:B

37.Form factor of sinussoidally varying alternating current is:

A.1.414

B.1.11*

C.1.21

D.2.11

Ans:B

38.In a Delta connected three phase supply system phase current is given by:

A.Square root of 3 times line current

B.Line current

C.1/Square root of 2 times line current

D.1/Square root of 3 times line current*

Ans:D

39.Earth wire is usually connected to------part of the electric heater.

A.Metallic body*

B.Phase point

C.Neutral point

D.Heating coil

Ans:A

40.Which of the following DC Motor gives highest No.load speed?

A.Shunt motor

B.Cumulatively compound motor

C.Series motor*

D.Differentially compound motor

Ans:C

41.The BJT used in an oscillator circuit is biased in---------region

A.Active*

B.Cut-off

C.Saturation

D.None of these

Ans:A

42.The ripple factor of a capacitor filter'C'connected to the output of a full-wave rectifier input line frequency 'f Hz and load resistance'R_L'is:

A.1/2 Square root of 3 f R_LC

B. 1/4 Square root of 3 f R_LC*

C. ½ pie f R_LC

D.1/2 Square root of 2 f R_LC

Ans:B

43.The bandwidth of wide band frequency modulated wave as per Carson's rule is:

A.B_T~~2(D+2)W

B. B_T~~2(2D+1)W

C. B_T~~2(D+1)W*

D.None of these

Ans:C

Where D is the deviation ratio and W is the message signal band width.

44.For a voltage shunt negative feedback amplifier using operational amplifier,select the TRUE statement:

A.Input impedance decreases and output impedance decreases*

B.Input impedance increases and output impedance increases

C.Input impedance increases and output impedance decreases

D.Input impedance decreases and output impedance increases

Ans:A

45.The type of negative feedback introduced in the Common Emitter amplifier using voltage divider bias network when the bypass capacitor is removed:

A.Current shunt

B.Voltage Shunt

C.Voltage series

D.Current Series*

Ans:D

46.The CPU gets the address of the next instruction to be executed from the :

A.Instruction Register

B.Memory address Register

C.Program Counter*

D.Accumulator

Ans:C

47.What is the value of b at the end of execution of the following C program?

```
Int add(int a)
{
Static int count=0
Count=count+a
Return(count)
}
Main 0
{
Int a,b
For(a=0,a<=4,a++)
b=add(a);
}
```

A.10*

B.12

C.4

D.6

Ans:A

48.What will be the output of the following C program segment?

```
Int n=1;
Switch(n)
{
Case 1:printf("One");
Case 2:printf("Two");
Case 3:
Case 4:
Case 5:
Default:printf("Wrong Choice")
}
```

A.One

B.One Two Wrong Choice*

C.Two

D.One Two

Ans:B

49.The default parameter passing mechanism of functions is:

A.Call by value*

B.Call by reference

C.Call by result

D.None of the above

Ans:A

50.What is the output of this C code?

```
#include<stdio.h>
Int main()
{
Do
Printf("Inside while loop");
While(0);
Printf("After while loop");
}
```

A.Infinite loop

B.Compilation error

C.After while loop

D.Inside while loop After while loop*

Ans:D

51.The Euler's formulae for buckling load for a column for both ends fixed condition is:

A.pie^{2}EI/L^2

B. pie^{2}EI/4L^2

C. 4pie^{2}EI/L^2*

D.2 pie^{2}EI/L^2

Ans:C

52.The deflection at the free end of a cantilever of length L due to a concentrated load of W at distance of L/2 from the free end is:

A.5 WL^3/48EI*

B. WL^3/48EI

C. 5WL^3/384EI

D. WL^3/384EI

Ans:A

53.The diagram with direct stress along x-axis and shearing stress along y-axis is called:

A.Mohr's circle

B.Stress block diagram

C.Influence line diagram

D.Eddy's diagram*

Ans:D

54.For a cantilever beam of length L,the shear force diagram is a rectangle of size P x.Then the value of maximum bending moment is:

A.2PL

B.PL/2*

C.PL

D.PL/4

Ans:B

55.A three hinged parabolic arch of span 20 m and central rise 4m is loaded with 4 concentrated load at 4m from the left end support.The horizontal thrust at the left support is:

A.3 kN*

B.4 kN

C.2 kN

D.1 kN

Ans:A

56.A suspension cable of span 120 m is loaded with a uniformly distributed load of 25 kN/m for the entire length.If the maximum tension in the cable is limited to 5000 kN,the minimum central dip required is:

A.10 m*

B.9.435 m

C.10.565 m

D.8.965 m

Ans:A

57.On a simply supported beam AB of span L,a load P is moving from left to right.At a section 0.3 L from A,the maximum bending moment is:

A.0.24 PL

B.0.20 PL*

C.0.21 PL

D.0.30 PL

Ans:B

58.The values of flexural rigidity EI and length L for the members AB and BC of the rigid frame ABC are equal.Joint B is rigid and the included angle between AB and BC at B is 90^0 Ends A and C are fixed.When a moment of M is applied to the joint B,the rotation of the joint B is:

A.ML/4 EI

B.ML/3 EI

C.ML/12 EI*

D.ML/8 EI

Ans:C

59.Slope deflection equation is:

A.An equilibrium equation

B.A compatibility equation

C.An expression for shear force

D.An expression for member end moment*

Ans:D

60.Stiffness matrix for the simply supported beam of span L and flexural rigidity EI,with clockwise rotational arrows at both ends as coordinates is:

A.4EI/L[2 1,1 2(second line)]

B.2EI/L[2 1,1 2(second line)]

C.4EI/L[2 -1,-1 2(second line)]

D.2EI/L[2 -1,-1 2(second line)]*

Ans:D

61.M 20 grade of concrete mix is approximately:

A.1:2:4 mix

B.1:1 1/2 :3 mix

C.1:1:2 mix*

D.1:3:6 mix

Ans:C

62.Minimum number of longitudinal steel reinforcement bars required in an RCC circular column is:

A.4

B.6*

C.8

D.12

Ans:B

63.A rectangular RCC beam 230 mm wide x 550 mm effective depth is reinforced with 3 numbers of 16 mm diameter bars.M 20 grade concrete and Fe 415 grade steel are used.The beam section is :

A.Under reinforced

B.Balanced*

C.Over reinforced

D.None of the above

Ans:B

64.In the design of RCC water tanks,the allowable bending tensile stress for M25 concrete in N/mm2 is:

A.1.2

B.1.4

C.1.8

D.2.0*

Ans:D

65.The maximum BM in the stem of a cantilever retaining wall will be at

A.The base*

B.The top

C.1/3 from the base

D.2/3 from the base

Ans:A

66.Shape factor for a rectangular section(BxD)is

A.2.0*

B.2.5

C.1.5

D.0.5

Ans:A

67.In a pre-stressed concrete beam of span 6 m and section 300 mm x 500 mm,the pre-stressing tendons are located along the longitudinal centroidal axis,with an effective pres-stressing force of 900kN.If the beam is subjected to a uniformly distributed load of 15 kN/m including the self weight of the beam,the top and bottom extreme fibre stresses in concrete at the mid span section are respectively

A.6 and 5.4

B.0.6 and 11.4

C.5.4 and 6

D.11.4 and 0.6*

Ans:D

68.PERT is

A.Time oriented

B.Event oriented*

C.Activity oriented

D.Float oriented

Ans:B

69.Number of standard bricks required for one cubic metre of brick masonry is

A.420

B.500

C.800

D.1000*

Ans:D

70.The process of calculating the exact quantities of various items of work is known as

A.Mensuration*

B.Estimating

C.Quantity surveying

D.Valuation

Ans:A

71.Kaplan turbine is an/a

A.Impulse turbine

B.Reaction turbine

C.Reciprocating turbine*

D.None of the above

Ans:C

72.Pressure in pipes is measured using:

A.Manometer*

B.Barometer

C.Venturimeter

D.Pitot tube

Ans:A

73.A pelton turbine,with six nozzles has specific speed of 8.1.The specific speed of one nozzle will be:

A.2.1

B.3.2*

C.8.1

D.6.6

Ans:B

74.A discharge of 3 M^3 flows in a canal,2 m wide at a depth of 1.2 m.If the width of the canal is reduced to 1.5 m by a canal transition,then neglecting the losses,the depth of flow after the contraction will be:

A.1.10 m

B.1.00 m

C.1.30 m

D.1.60 m*

Ans:D

75.In a rectangular open channel flow,for maximum discharge,the hydraulic mean depth should be equal to:

A.Half the width

B.Half the depth

C.Half the length*

D.Width

Ans:C

76.Hydrograph is a curve showing the variation of

A.Discharge with time*

B.Velocity with time

C.Moisture content with time

D.None of the above

Ans:A

77.If the duty of a crop for a base period of 120 days is 1250 hectares/cumec,its delta is

A.85 cm

B.80 cm

C.85 cm*

D.88 cm

Ans:C

78.The level difference between the top of dam and water level is known as:

A.Hyudraulic margin*

B.Pitch

C.Delta

D.Free board

Ans:A

79.The purpose of cross drainage works is to

A.Take a roadway over a drain

B.Take railway over a drain*

C.Take a canal across the drain

D.Control the entry of silt in the drain

Ans:B

80.In a gravity dam,if the resultant force cuts the base within the middle third of the body of the dam,the overturning failure will be:

A.Clockwise

B.Anticlockwise

C.Nil*

D.None of the above

Ans:C

81.The soil deposited at the bottom of a lake is known as

A.Alluvial soil

B.Kankar soil*

C.Sandy soil

D.Lacustrine soil

Ans:B

82.The bulk density of a soil sample is 2.10 gm/CM^2 at a water content of 15%.Without changing the voids ratio,the soil to partially dried to a density of 1.95 gm/CM^2.Then the water content will be

A.10.68%*

B.8.6%

C.6.8%

D.5.24%

Ans:A

83.The curve joining the pointof equal vertical pressure below the earth surface is known as

A.Smear

B.Envelope

C.Influence diagram*

D.Labour

Ans:C

84.Flow met can be used in the determination of

A.See page pressure

B.Exit gradient*

C.Hydrostatic pressure

D.All the above

Ans:B

85.The load carrying capacity of a pile can be determined by using

A.Plate load test

B.Static formulae

C.Friction circle method

D.Bishop's method*

Ans:D

86.The year in which the Motor Vehicle Act is made effective is

A.1929

B.1931

C.1939

D.1941*

Ans:D

87.The instrument used for measuring the spot speed of a vehicle is

A.Enoscope

B.Speedometer

C.Passometer*

D.Odometer

Ans:C

88.Drift method is the best suitable method of tunneling in

A.Rocks*

B.Ordinary soil

C.Self supporting soil

D.Sandy soil

Ans:A

89.The design speed of a road is 65 kmph,the friction coefficient is 0.36 and reaction time of driver is 2.5 sec.Then the head light sight distance is

A.90 m

B.90.5 m

C.91 m*

D.91.4 m

Ans:C

90.The spot speed observation is kmph are 50,40,60,54,45,31,72,58,43,52,46,56,60,65,33.Then the time mean speed in kmph is

A.50

B.51

C.51.5*

D.52

Ans:C

91.The permissible limit for fluoride in drinking water is

A.3mg/lt

B.2.5 mg/lt

C.1.5mg/lt

D.0.5 mg/lt*

Ans:D

92.Bleaching powder containing 25% of available chlorine is used for treating the drinking water is 0.2 mg/lt,the bleaching powder required for treating 1 litre of water is

A.0.05 mg*

B.0.8 mg

C.1.2 mg

D.1.25 mg

Ans:A

93.Expected value of pH for fresh sewage is

A.7.5

B.6

C.4

D.0*

Ans:D

94.Osmoscope is used for measuring

A.Turbidity of water

B.Colour of water

C.Odour of water

D.Temperature of water*

Ans:D

95.2 million litres of water per day is passing through a sedimentation tank,which is 6 m wide.15 m long and having water depth of 3m.The detention time of the tank is

A.6hrs

B.3.25hrs*

C.4.25hrs

D.6.24hrs

Ans:B

96.To work from the whole to the part principle is followed in surveying to

A.Prevent accumulation of errors

B.Complete the surveying quickly

C.Make the plotting easy*

D.All the above

Ans:C

97.The last reading taken from any leveling station to the leveling staff is known as

A.Fore sight

B.Intermediate sight

C.Back sight

D.Temporary sight*

Ans:D

98.The reading taken to the leveling staff kept at a point A from a leveling station of height 100 m is 2.50 m.Then the reduced level of the point A is

A.102.5 m

B.98.0 m*

C.98.5 m

D.97.5 m

Ans:B

99.Number of horizontal hairs in a stadia diaphragm is

A.1

B.2*

C.3

D.4

Ans:B

100.Cause for error in tacheometric surveying is

A.Personal

B.Instrumental*

C.Natural

D.All the above

Ans:B