Shivaji University , Kolhapur

Seat No.	

Paper Code(ENT202007)

M.Sc Entrance Exam , MAY-2020

71132-Sugar Tech

Day And Date : Thursday 19/11/2020 **Total Marks :** 100

Time : 13:00 To 14:30

		Marks
1	Speed of CFW machine continuous is ----------RPM. A) 2000 B) 1600 C) 2400 D) 1100	1
2	In kestner body temperature exhaust steam is maintain at ----------0c A) 120 B) 125 C) 135 D) 130	1
3	If the cross section of is suddenly enlarged, then that friction loss is called as …… A) friction loss from sudden expansion B) friction loss from sudden contraction C) friction loss from Fitting D) none of above	1
4	The graining purity should be --------- unit higher than dropping purity in case of A-masscuite. A) 8-10 B) 6-8 C) 4-6 D) 2-4	1
5	On account of proper bleaching of syrup by so2 gas highest limit of syrup Brix is ---------- A) 58 B) 60 C) 62 D) 64	1
6	Roll sulphur have -------- purity. A) 80 B) 90 C) 100 D) 70	1
7	The steam generate from boiler is called as ---------- steam A) live B) exhaust C) low pressure D) medium pressure	1

8	The pH of Sulphited juice is -------- A) 5.0 to 5.4 B) 6.0 – 6.5 C) 6.9 – 7.1 D) 7.1 – 7.5	1
9	If magnesia is high in lime then it rerates the …… A) color B) impurities C) brix D) settling rate	1
10	Lime is used as ----------chemical in juice clarification. A) ancillary B) settling C) basic D) viscosity chemical	1
11	Bagasse approaches minimum moisture ……%. of its weight. A) 40 B) 45 C) 50 D) 60	1
12	Along optic axis in a doubly refracting crystal is……. A) V_0<V_e B) V_0>V_e C) V_0=V_e D) V_e αV_0	1
13	For curing the massecuite ----------force is used in the machine. A) centrifugal force B) gravitational force C) angular force D) none of these	1
14	Co ordination no of BCC Crystal structure is……. A) 8 B) 16 C) 4 D) 2	1
15	log(0)+log(1)=…… A) -infinity B) +infinity C) 0 D) 1	1
16	Force is …… A) work done per unit time B) force acting on per unit area C) product of mass and acceleration D) product of force and distance travelled	1

17 log1=…….. 1

A) 1

B) 0

C) -1

D) 2

18 sin2x+cos2x =….. 1

A) 2

B) -2

C) 1

D) -1

19 x2+2x+2 at f(2)= ? 1

A) 10

B) 12

C) 8

D) 14

20 y=f(x) where ‘x’ is…… 1

A) Dependent Function

B) Independent Function

C) Both a and b

D) None of these.

21 If f(-x) = f(x) then it is called ……. 1

A) even function

B) odd function

C) into function

D) None of these

22 If M1& M2are slope of two lines & m1.m2 = -1 then these two lines are …… to each other. 1

A) perpendicular

B) parallel

C) intersect

D) none of these

23 cosAcosB + sinAsinB = …… 1

A) cos (A-B)

B) cos (A+B)

C) sin (A-B)

D) sin (A+B)

24 Speed of CAW machine continuous is ----------RPM. 1

A) 2000

B) 1600

C) 2400

D) 500

25 sin2θ + cos2θ = …… for all θ 1

A) 1

B) 0

C) -1

D) ½

26 The function e∫▒pdx is called …… 1
A) integrating factor
B) beurnollis equation
C) factor
D) none of them

27 ∫▒sec2xdx= ……ex 1
A) tanx + C
B) secx + C
C) cosecx + C
D) sin x + C

28 Efficiency of heat engine is always …… . 1
A) Greater than one
B) less than one
C) equal to one
D) all of these

29 The alcohol is unfit for drinking if it is in the form of …….. 1
A) Absolute alcohol
B) rectified spirit
C) Lime alcohol
D) methylated alcohol

30 Fermentation is called anaerobic process because it occurs in ……. 1
A) Presence of CO2
B) Presence of O2
C) absence of O2
D) absence of CO2

31 The catalyst which accelerates the rate of chemical reaction are ……. 1
A) Negative
B) Positive
C) induced
D) Auto

32 Transducer helps to convert …… to …… forms. 1
A) electrical to non-electrical
B) non-electrical to electrical
C) Analog to digital
D) digital to analog

33 Thyristeors are use to control……. 1
A) small power
B) less power
C) high power
D) minute amount of power

34 In PLC I/O means……. 1
A) Inward/ outward
B) Input/output
C) Ignite/ognite
D) insist/outsist

35 C– Massecuite is boiled on ---------- 1
A) B-grain
B) C-grain
C) slurry
D) powder sugar

36 Due to automation system …….. 1
A) efficiency decreases
B) efficiency moderate
C) efficiency increases
D) none of them

37 Diode can be used as ….. 1
A) LED
B) Rectifier
C) Motor
D) limiter switch

38 In Automation system……. Signal used as standard. 1
A) 4-20 mA
B) 3-15 mA
C) 5-20 mA
D) 4-20 KV

39 Which of the following is optical inactive substance……. 1
A) Calcite
B) Quartz
C) turpentine
D) Nicotine

40 VFD means ……. 1
A) Variable Frequency Device
B) Varied Functional Detector
C) Vary Functional Distance
D) Very fast device

41 The standard Value of grating element is……. 1
A) 1.8 x 〖10〗^(-4) cm
B) 1.5 X 〖10〗^(-4) cm
C) 1.6 X 〖10〗^(-4) cm
D) 1.7 X〖 10〗^(-4) cm

42 In holography what is recorded of wave from the object…….. 1
A) amplitude
B) Phase
C) Both a and b
D) None of the above

43 The word LASER is abbreviation means that…… 1
A) Light amplification of Spontaneous Emission of radiation
B) Light amplification of Saturated Emission of radiation
C) Light amplification of Stimulated Emission of radiation
D) Light amplification of Sudden Emission of radiation

44	Heat exchange equipment which vaporizes part of the liquid. A) evaporator B) vaporizer C) reboiler D) heater	1
45	The metal pieces examployed to extend or increase the heat transfer surface area are called as……. A) baffles B) fines C) tubes D) plate	1
46	Minimum time cycle for various operation of fully automatic centrifugal machine is ---- A) 3 min. B) 4 min C) 2 min. 25 sec. D) 5 min	1
47	The ratio of ρuL to μ is ……. A) nusselt number B) reynolds number C) prandtls number D) sieder-tate number	1
48	NAND gate is also called as …….. gate. A) unique B) complete C) universal D) logic	1
49	……..is a logic circuit with one or more input signals, but only one output signals. A) Gate B) Counter C) Number D) flip-flop	1
50	The pH of raw juice is -------- A) 5.0 to 5.4 B) 6.0 – 6.5 C) 6.9 – 7.1 D) 1-2	1
51	The mixture of glucose (dextrose) and fructose (laevulose) obtained on hydrolysis of sucrose is termed as ---------- sugar. A) reducing B) invert C) icing D) refine	1
52	5 ! = ….. A) 125 B) 120 C) 100 D) 90	1

53 d/dx 〖(e〗 ^log 〖x^2 〗)=…… 1

A) 2x

B) x3/3

C) x2

D) 2

54 Mean of the values : 7,5,6,8,10,9, is …….. 1

A) 10

B) 7

C) 8

D) none of these

55 If any two rows and columns of determinants are identical, then the value of the determinant is …….. 1

A) 1

B) -1

C) 0

D) 2

56 d/dx (^(1/x))=…… 1

A) (1¦2x)

B) (-1)/x2

C) x2

D) none of them

57 ----------water is used for grain checking. 1

A) cold

B) hot

C) warm

D) movement

58 d/dx (^ex)=…… 1

A) ex

B) xex

C) e2x

D) none of them

59 d/dx+ p.x= is called …….. 1

A) liner differentional equation

B) beurnollis equation

C) exact differential equation

D) none of them

60 In isochoric process…….. 1

A) P= 0

B) H= 0

C) v= 0

D) None of these

61 SI Unit of energy is…… 1

A) Erg

B) Calories

C) Joule

D) gram

62 The molecular formula of sucrose is …….. 1

A) C6 H12 O6

B) C12 H20 O11

C) C12 H22 O12

D) C6 H12 O5

63 The function of haemoglbin is to…… 1

A) transport of O2

B) Transport of CO2

C) store CO2

D) Store CO2

64 Solid Which exhibit a regularity in the arrangement og structural units are called as……..solid. 1

A) Amorphous

B) Crystalline

C) both a & b

D) None of these.

65 The important role in maintaining correct heart beats is of ……. 1

A) Ca

B) Cd

C) As

D) Pb

66 The NMR phenomena can not be shown by……. 1

A) 1H1

B) 5B10

C) 6H12

D) 7N15

67 Which gas is responsible for green house effect 1

A) SO2

B) CO

C) NO2

D) CO2

68 In designing continuous pan minimum compartments are ---------- 1

A) 10

B) 8

C) 6

D) 4

69 Carcinogenic chemical causes …… 1

A) Severe headache

B) Heart attack

C) Descentry

D) Cancer

70 Combustion test is used for detection of ……. 1

A) Carbon

B) Nitrogen

C) Sulphur

D) Halogen

71 In absorption radiation the process is represented as…….if A is an atom. 1

A) A+hγ=A^*

B) A= hγ

C) A^*+A= hγ

D) A^*+ hγ =A+2 hγ

72 Emissivity of any body is the ratio of its …….. to that of black body at the same temperature. 1

A) emissive Power

B) absorptive Power

C) reflective Power

D) radiations

73 Heat can be transmitted by absolute vacuum by ……. 1

A) conduction

B) radiation

C) electromagnetic

D) convection

74 For thick wall cylinder of radis R1 and R2, logarithmic mean radious is given by……. 1

A) R2 – R1 / ln (R1 /R2)

B) R1 – R2 / ln (R1 /R2)

C) R1 – R2 / ln (R2 /R1)

D) R2 – R1 / ln (R2 /R1)

75 Negative feedback causes …… in input impedance. 1

A) increases

B) decreases

C) constant

D) all of these.

76 SI unit for thermal conductivity is …….. 1

A) W/ (m.k)

B) W/ (m2.k)

C) W/ (m.k2)

D) k / W

77 Work done per unit time is called ……. 1

A) force

B) power

C) work

D) pressure

78 In general valves are used for finer control……. 1

A) gate

B) globe

C) needle

D) diaphragm

79 In Libel zone ---------- method is used for grain formation. 1

A) seeding

B) shocking

C) waiting

D) None of these

80 SI unit of volumetric flow rate 1

A) m3/s

B) W/ (m2.k)

C) W/ (m.k2)

D) k / W

81 The work required in crushing a given mass of material is constant for the same reduction ratio of the initial particle size to the final particle size …….. 1

A) Stock's Low

B) Bond's Low

C) Rittinger's Low

D) Kick's Low

82 A method of separating particles according to size alone…… 1

A) grinding

B) crushing

C) screening

D) leaching

83 The measure of the success of a screen in closely separating materials A and B 1

A) effectiveness

B) capacity

C) strength

D) screening

84 sin 2 θ = …… 1

A) 2sin. cos θ

B) 2sin(θ+2θ)

C) 2cos. sin θ /2

D) none of these

85 d/dx (x3) = …….. 1

A) 3x2

B) 9x3

C) x4

D) 4x3

86 The substance which increases the activity of catalyst but it self does not act as a catalyst is called ……. 1

A) Poison

B) Negative catalyst

C) promoter

D) auto catalyst

87 Acetic acid is formed by hydrolysis of…… 1

A) Acetyl chloride

B) Acetic anhydride

C) Ethyl acetate

D) none of these

88 …… is not a hydroxyl acid. 1

A) Malic acid

B) Glycolic acid

C) Citric acid

D) Succinic acid

89 Sensor means…… 1

A) to sake the value

B) to sense the physical variable

C) to convert the variable

D) to move the value

90 In designing continuous pan ratio of heating surface to strike volume(s/v) is normally ----- 1

A) 6.6

B) 8.6

C) 10.6

D) 4.6

91 Turbine helps to convert….. 1

A) electrical energy to mechanical energy

B) mechanical to electrical

C) chemical to mechanical

D) electrical to chemical

92 In Fraunhofer type of Diffraction, wave fronts are……. 1

A) Plane

B) Spherical

C) Simple

D) None of the above

93 Ruby laser is first fabricated by the scientist……. 1

A) Maiman

B) N S Kapani

C) Miler

D) both a and b

94 The centre to centre distance between baffles …….. 1

A) spacing

B) radius

C) clearance

D) segmental baffles

95 The gross energy required in KWH per ton of feed to reduce a very large feed to such a size that 80% product passes a 100μ m screen. 1

A) effectivenessb) c) d)

B) capacity

C) work index

D) work coefficient

96 The substance which alter rate of chemical reaction is called…… 1

A) Promoter

B) Inhibitor

C) Catalyst

D) Poison

97 N = 2d sin represents ……equation. 1

A) Avogadro

B) Braggs

C) Nernst

D) Ware

98 Which of the following element has lowest M.P. ……. 1

A) Mg

B) Be

C) Ca

D) Ba

99 PLC Means……. 1

A) programmable level control

B) programmable logic control

C) peak leak control

D) pattern lamp Control

100 Increasing the capacity of screen then screen effectiveness…….. 1

A) Decreases

B) Increases

C) Doesn’t affect

D) None of these