Name	

Batch..... Roll No.

FOUNDATION SCREENING MOCK TEST SERIES

Date: 18-08-2024

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FN2	4 _D /TP/PCBM	PHYSICS + CHEMIST	PHYSICS + CHEMISTRY + BIOLOGY + MATHEMATICS				
		<u> P</u>	PHYSICS				
1.	Focal length of a	plane mirror is					
	A) At infinity	B) Zero	C) Negative	D)	None of these		
2.	The optical pheno	omenon twinkling of sta	rs, is due to				
	A) Atmospheric r	eflection	B) Total reflection	ı			
	C) Atmospheric re	efraction	D) Total refraction	n			
3.	A concave mirror	gives real, inverted and	same size image if the	object is	placed		
	A) At F	B) At infinity	C) At C	D)	Beyond C		
4.	Which of the follo	owing is true for the thir	d law of motion?				
	A) Action-Reaction	on pair always acts on th	ne same body				
	B) They act on di	fferent bodies in opposit	e directions				
	C) Action-Reaction	on pairs have the same n	nagnitude and direction	S			
	D) Act on either b	oody at normal to each o	ther				
5.	Which of the follo	owing is true about force	e?				
	A) Force is invisi	ble	B) Force can mov	e a body			
	C) It can deform a	a body	D) All of the above	⁄e			
6.	Rocket works on	the principle of conserva	ation of				
	A) Mass	B) Energy	C) Momentum	D)	Velocity		
7.	Which of the follo	owing is the SI unit of fo	orce?				
	A) kgm/s ²	B) kgm/s	C) Newton/m	D)	Newton		
8.	The path length tr	avelled by a body in a g	iven time interval is kn	own as _			
	A) Distance	B) Velocity	C) Acceleration	D)	Moment		

9.	Velocity is defined as	per time		
	A) Distance	B) Displacement	C) Power	D) Acceleration
10.	The physical quantity	that has both magnitude	and direction is known	as
	A) Vectors	B) Scalars	C) Both A & B	D) Neither A nor B
11.	Name the scientist wh	o first used a glass prisn	n to obtain the spectrum	of sun light?
	A) C.V Raman	B) Lord Reyleigh	C) Issac Newton	D) S.Chandrashekar
12.	A smooth shining surficelled	face, which rebounds th	e light back in the same	e or in different direction, is
	A) A mirror	B) A lens	C) Reflection of light	D) Point of incidence
13.	In case of reflection of	flight, the angle of incid	lence (i) and the angle o	f reflection (r) are related as
	A) i = r	B) $i \le r$	C) $i > r$	D) No definite relation
14.	If light falls perpendic	ularly on a plane mirror,	, what will be the angle i	n which it will be reflected?
	A) 45 ⁰	B) 90°	C) 180°	D) 360°
15.	In our eye cells	can sense colour		
	A) Red	B) Cone	C) Both rod and cone	D) Neither rod nor cone
16.	What does the slope o	f the velocity-time grapl	h give?	
	A) Speed	B) Velocity	C) Acceleration	D) Displacement
17.	↑ v			
	t —:			
	From the given v-t gra	uph it can be inferred tha	nt the object is	

A) In uniform motion

B) At rest

C) In non-uniform motion

D) Moving with uniform acceleration

18.	If the displacement of an object is proportiona	l to square of time, then	the object moves with
	A) Uniform velocity	B) Uniform acceleration	on
	C) Increasing acceleration	D) Decreasing accelera	ation
19.	What kind of substance are known as lubrican	ts	
	A) Increase friction	B) Decrease friction	
	C) Increase/decrease friction	D) None of these	
20.	Rolling friction is smaller than?		
	A) Sliding friction B) Static friction	C) Fluid friction	D) All of the above
21.	Friction is a/an		
	A) Evil B) Foe	C) Both A & B	D) None of these
22.	Friction always		
	A) Helps the motion B) Opposes the motion	n C) Both of these	D) None of these
23.	When an object moves at a constant speed and	in a straight line, what	kind of motion?
	A) Uniform motion	B) Non-uniform motio	n
	C) No motion	D) Accelerated motion	
24.	Rate of motion is defined as		
	A) Change in position	B) Change in speed	
	C) Change in direction	D) Change in time	
25.	Which law is also known as the law of inertia;)	
	A) Newton's 1stlaw	B) Newton's 2 nd law	
	C) Newton's 3 rd law	D) Law of conservation	n of momentum

CHEMI	STRY
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26.	If the boiling point of them	of components have ver	ry small differences,	can be used to separate
	A) Separating funnel		B) Centrifugation	
	C) Fractional distillat	tion	D) Chromatography	
27.	Chromatography was	s first employed for sepa	aratingsubstance	es
	A) Denser	B) Coloured	C) Lighter	D) All of these
28.	Identify pure substan	ce		
	A) Salt solution	B) Air	C) Carbon dioxide	D) Soil
29.	State a separation tech	nnique that could be used	l to separate camphor and	d common salt from a mixture
	A) Filtration	B) Crystallisation	C) Evaporation	D) Sublimation
30.	Who discovered elem	nents like Selenium, Th	orium, Cerium and Silic	on?
	A) Sir Humphry Dav	у	B) Henry Cavendish	
	C) Berzelius		D) John Dalton	
31.	is the smalles	t particle which shows	all the characteristic pro	perties of an element
	A) Atom	B) Molecule	C) Compound	D) Mixture
32.	How many atoms are	e present in one molecul	le of H ₂ SO ₄ ?	
	A) 6	B) 7	C) 1	D) 2
33.	Which one of the foll	lowing is a petrochemic	eal?	
	A) Ammonia	B) Coke	C) Acetone	D) Praffin wax
34.	Conversion of dead v	vegetation into coal is ca	alled	
	A) Carbonisation	B) Distillation	C) Coal gas	D) Natural gas

Which of the following is a chemical reaction that produces heat when a substance reacts with

C) Reduction

C) Maximum

C) Ethanol

C) Spontaneous

Which of the following describes a type of combustion in which a substance suddenly bursts into

D) Hydrolysis

D) Room

D) LPG

D) None of the above

B) Combustion

B) Highest

Which of the following is not an inflammable substance?

B) Wood

B) Explosion

flame without any apparent cause?

Ignition temperature is the temperature which the substance catches fire

40.

41.

42.

43.

oxygen?

A) Oxidation

A) Lowest

A) Alcohol

A) Rapid

	A) No neutrons and o	ne proton	B) One neutron and two protons			
	C) One electron and t	wo neutron	D) One proton and one neutron			
15.	The electronic configu	uration of chlorine is				
	A) 2, 7	B) 2, 8, 8, 7	C) 2, 8, 7	D) 2, 7, 8		
16.	What is the octet rule	in chemical bonding?				
	A) Atoms tend to gair	8 electrons in their out	ermost shell			
	B) Atoms tend to lose 8 electrons in their outermost shell					
	C) Atoms tend to share 8 electrons in their outermost shell					
	D) Atoms tend to have 8 electrons in their innermost shell					
1 7.	Which type of bond is	s formed by transfer of 6	electrons between atoms	?		
	A) Hydrogen bond		B) Electrostatic bond			
	C) Covalent bond		D) Ionic bond			
18.	Which of the following	g is accompanied by co	oling?			
	A) Vaporisation		B) Evaporation			
	C) Condensation		D) None of these			
19.	When water at 0°C free	eezes to form ice at the s	same temperature of 0°C	t, then it:		
	A) Absorbs some heat		B) Releases some hea	t		
	C) Neither absorbs no	r releases heat	D) Absorbs 3.34 × 103	5 J/kg of heat		
50.	What is the physical s	tate of matter in which	particles have the least k	xinetic energy?		
	A) Solid	B) Liquid	C) Gas	D) Plasma		

BIOLOGY

51.	Which of the following	g organisms can be foun	nd in extreme saline con	ditions?
	A) Eubacteria	B) Archaebacteria	C) Cyanobacteria	D) Myco bacteria
52.	Linnaeus used which	kingdom of classificatio	n?	
	A) Artificial system		B) Natural system	
	C) Phylogenetic system	m	D) Asexual system	
53.	In which of the follow	ving kingdom are Archae	e and Nitrogen - fixing o	organisms classified?
	A) Animalia	B) Plantae	C) Monera	D) Fungi
54.	Bentham and Hookes	gave which system of c	lassification?	
	A) Numerical	B) Phylogenetic	C) Artificial	D) Natural
55.	Animals that consume	e both plant and animal	matter are referred as	
	A) Carnivores	B) Omni-carnivores	C) Omnivores	D) None of the above
56.	Science that deals with and with each other is	-	een living organisms wit	n their physical environment
	A) Ecosystem	B) Biodiversity	D) Environment	D) Ecology
57.	Enrichment of water b	podies by nutrient that ca	auses great damage to th	ne ecosystem
	A) Evapotranspiration	1	B) Photoperiodism	
	C) Eutrophication		D) Green house effect	
58.	Which of the followin	g factors are responsible	e for diversity of crops?	
	A) Temperature	B) Humidity	C) Rainfall	D) All of the above
59.	Paddy, Maize, Soyabe	ean, Ground nut and Cot	ton are what type of cro	ps?
	A) Kharif crops	B) Rabi crops	C) Zaid crops	D) None of the above

60.). Which of the following crops are also known as winter crops?			
	A) Rabi crops	B) Zaid crops	C) Kharif crops	D) All of the above
61.	Mushroom belongs to			
	A) Algae	B) Virus	C) Fungi	D) None of these
62.	Rhizobium bacteria			
	A) Help in digestion		B) Help in nitrogen fix	ation
	C) Cause diseases		D) All of the above	
63.	Microorganisms are			
	A) Unicellular	B) Multicellular	C) Both	D) None of these
64. Which of the following are examples of autotrop			rophic organisms?	
	A) Fungi and virus		B) Virus and bacteria	
	C) Green plants and so	ome bacteria	D) None of the above	
65.	Which of the following	g are filtration units of l	kidneys?	
	A) Ureter	B) Nephrons	C) Neurons	D) Urethra
66.	During respiration in h	numans, gaseous exchar	nge takes place in	
	A) Alveoli of lungs	B) Throat and larynx	C) Alveoli and throat	D) None of the above
67.	Which of the followin leaf?	g plant tissue is used to	transport minerals and	water from the roots to the
	A) Phloem	B) Parenchyma	C) Xylem	D) Collenchyma
68.	What are the primary	nutrients that provide qu	nick usable energy to bo	dy?
	A) Carbohydrates	B) Proteins	C) Lipids	D) Nucleic acid
69.	Which group of enzyn	nes breaks up starches a	nd carbohydrates?	
	A) Proteases	B) Lipases	C) Amylases	D) All of these

70.	Pancreas produces dig	estive enzymes and rele	ases them into	
	A) Colon	B) Gall bladder	C) Liver	D) Duodenum
71.	What is the structural a	and functional unit of lif	fe?	
	A) Cell	B) Organism	C) Tissue	D) Organ
72.	Which scientist propos	sed the cell theory?		
	A) Matthias Schleiden	and Theodor Schwann	B) Robert Hooke	
	C) Louis Pasteur		D) Anton Van Leeuwe	nhoek
73.	Which types of cells la	ack a well-defined nulce	us?	
	A) Prokaryotic cells	B) Eukaryotic cells	C) Plant cells	D) Animal cells
74.	Which of the following	g is not a type of animal	tissue?	
	A) Epithelial tissue	B) Nervous tissue	C) Muscular tissue	D) Vascular tissue
75.	The tissue responsible	for transmitting electric	al impulses in human b	ody is:
	A) Epithelial tissue	B) Nervous tissue	C) Muscular tissue	D) Connective tissue
		MATHE	<u>MATICS</u>	
76.	Which of the following	g is a rational number th	nat lies between $\frac{3}{5}$ and $\frac{8}{3}$?
	A) 2.234567891011	···	B) 2.7878787878	
	C) 3.22222		D) 2.543543543	
77.	Which of the following	g is a linear expression i	n one variable?	
	A) $7x + y = 2$	B) $5 + 2x = 8$	C) $y^2 + x$	D) $35x + 7$
78.	Solve $79x - 35 = 19 - 5$	5 x		
	A) $x = \frac{14}{9}$	B) $x = \frac{9}{14}$	C) $x = \frac{9}{16}$	D) $x = \frac{16}{9}$

- 79. A number whose decimal expansion is terminating or non-terminating recurring is called a/an
 - A) Irrational number B) Whole number
- C) Rational number
- D) Integer
- What is the equation that represents the statement "three less than four times a number is equal to 80. seven"?
 - A) 4x-3=7
- B) 4x + 3 = 7 C) 4x 3 = -7 D) 4x + 3 = -7

- What is the value of $\sqrt{196}$? 81.
 - A) 11

B) 21

- C) 16
- D) None of these

- Which of the following is an irrational number? 82.
 - A) 2.35853585.....

B) 4.3

C) 2.791093458784.....

- D) $\sqrt{16}$
- 83. The decimal expansion of an irrational number will be:
 - A) Terminating

- B) Non-terminating recurring
- C) Non-terminating non-recurring
- D) None of these
- Solve and find the value of x: 84.

$$\frac{x-5}{2} = 5 - 7x$$

- A) x = -1
- B) x = 1
- C) x = 5
- D) None of these

- Which of the following is a perfect cube? 85.
 - A) 243
- C) 2744
- C) 9

- D) None of these
- The number 108 is not a perfect cube. By which smallest natural number should 108 be multiplied 86. so that the product is a perfect cube
 - A) 3

B) 5

C) 2

D) None of these

- The value of $\frac{1}{2^{-2}}$ is
 - A) 4

B) 8

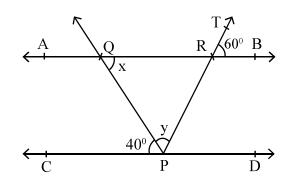
- C) -4
- D) None of these

- 88. Find m so that $(-2)^{m+2} \times (-2)^2 = -32$
 - A) m = 2
- B) m = -2
- C) m = 1
- D) None of these

- 89. Find the value of $(2^0 + 3^{-2}) \times 9$
 - A) 10
- B) 20
- C) -10
- D) None of these

- 90. $2 \times 10^{-4} =$
 - A) 0.00002
- B) -0.00002
- C) 0.0002
- D) None of these

- 91. 305000 =
 - A) 3.05×10^4
- B) 3.05×10^5
- C) 3.05×10^{-5}
- D) None of these
- 92. One of the following numbers is a perfect square. Looking at their units digit, identify which of the following is a perfect square :
 - A) 1032773
- B) 256036
- C) 248687
- D) 348228
- 93. In the given figure, if AB || CD, $\angle QPC = 40^{\circ}$ and $\angle BRT = 60^{\circ}$ then find x and y



- A) $x = 40^{\circ}$, $y = 60^{\circ}$
- B) $x = 40^{\circ}$, $y = 80^{\circ}$
- C) $x = 60^{\circ}$, $y = 80^{\circ}$
- D) None of these

- 94. Which of the following statements is/are true:
 - i) Angles opposite to equal sides of an isosceles triangle are unequal
 - ii) The sides opposite to equal angles of a triangle are equal
 - iii) In an isosceles triangle, two angles are always equal
 - A) i and ii are true
- B) ii and iii are true
- C) All are true
- D) None is true

95.	Sum	of the	three	angles	of a	triangle	e is	always	
)).	Sum	or the	uncc	angics	OI a	urangr	C 13	arvays	•

	•
A)	360°

C)
$$120^{\circ}$$

96. The degree of the following polynomial is:

$$5 - y^3 - 2y^4 + 4y^5 + 7y^{10}$$

D) None of these

The degree of a non-zero constant polynomial is: 97.

D) Cannot be determined

98. Which of the following is/are polynomials:

i)
$$x^2 + 2\sqrt{x} + 7$$
 ii) $x^3 + 2x + 1$

ii)
$$x^3 + 2x + 1$$

iii)
$$x^{-2} + 7$$

v)
$$y^3 - 9$$

vi)
$$3t^2 + 1$$

A) Only ii, iv and v are polynomials

B) Only ii, v and vi are polynomials

C) Only ii, iv, v and vi are polynomials

D) None of these

99. Which of the following is a linear polynomial:

A)
$$x^3 - x + 1$$

B)
$$x + 7$$

C)
$$x^2 - 3x$$

D) X^2

100. The value of the polynomial
$$7x-3x^2+2$$
 at $x=-2$ is

B)
$$-20$$

C)
$$-24$$

D) None of these

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FN24 _D /TP/PCBM		P	Class X (IX Studying)		
<u>PHY</u>	YSICS	CHEMISTRY	BIOLOGY	MATHEMATICS	
1.	A	26. C	51. B	76. D	
2.	С	27. B	52. A	77. D	
3.	С	28. C	53. C	78. B	
4.	В	29. D	54. D	79. C	
5.	D	30. C	55. C	80. A	
6.	С	31. A	56. A	81. D	
7.	D	32. B	57. C	82. C	
8.	A	33. D	58. D	83. C	
9.	В	34. A	59. A	84. A	
10.	A	35. D	60. A	85. B	
11.	C	36. D	61. C	86. C	
12.	A	37. C	62. B	87. A	
13.	A	38. D	63. B	88. C	
14.	C	39. B	64. C	89. A	
15.	В	40. B	65. B	90. C	
16.	C	41. A	66. A	91. B	
17.	A	42. B	67. C	92. B	
18.	В	43. C	68. A	93. B	
19.	В	44. D	69. C	94. B	
20.	D	45. C	70. D	95. D	
21.	C	46. A	71. A	96. D	
22.	В	47. D	72. A	97. A	
23.	A	48. C	73. A	98. C	
24.	A	49. B	74. D	99. B	
25.	A	50. A	75. B	100. C	