PHYSICS

1) Which of the following is not a fundamental quantity?

a) Electric current b) Frequency

c) Temperature d) Luminous intensity

2) Mass of the earth and radius of the earth are 9.6 x 10^{31} Kg and 6400 Km. Its order of magnitudes are

a) 10^{31}, 10^{4} b) 10^{31}, 10^{7} c) 10^{32}, 10^{4} d) 10^{32}, 10^{7}

3) The component of a vector is

a) Always equal to its magnitude b) Always greater than its magnitude

c) Always less than its magnitude

d) some times greater and some times less than its magnitude

4) A bullet is fired from a gun so as to secure a maximum horizontal range. If its time of ascent is 5 sec .Its velocity of projection will be

a) 4.9 m/s b) 49 m/s c) 9.8 m/s d) 98 m/s

5) The dimension of moment of a force is $[M^1 L^2 T^{-2}]$. Which of the following has the same dimension?

a) Impulse b) Energy c) Momentum d) Force

6) The collision in which the relative velocity of separation after collision is zero, the collision is ----

a) Perfectly inelastic b) Perfectly elastics

c) Some time elastic and some time inelastic d) partially elastic

7) Automiser or sprayer works on the principle of

a) Pascal's law b) Reynold's number

c) Bernoulli's principle d) Newton's law

8) If pressure upon a medium is increased velocity of sound wave

a) Does not change b) Decreases c) Increases

d) May increases or decreases depending on density of the medium.

9) The notes having numerical ratio 1:2, 2:3:4, Forms a

a) Minor chord b) Major chord

c) Common chord d) simple chord

10) When a ray of light travels from water to air

a) Its frequency increases b) its frequency decreases

c) Its wavelength increases d) its wavelength decreases

11) When a white light is passed through a prism, it emerges out in seven constituent colours due to dispersion. …….colour suffers maximum deviation.

a) Red b) Violet c) Yellow d) Orange

12) Negative lens is ……..

a) Convex lens because its focal length is positive

b) Convergent lens having positive focal length

c) Concave lens or convergent lens having focal length negative

d) Negative lens does not exists

13) A convex lens magnifies an object 5 times. If the object distance is 5 cm, the image distance on the same side will be

a) 25 cm b) 1 cm c) 2.5 cm d) 10 cm

14) Coulomb's law hold good when the charges are

a) Stationary charges b) moving charges

c) Stationary and point charges d) moving point charges

15) Dielectric constant is

a) Constant for all material medium b) dimensionless quantity

c) a pure number d) both (b) and (c)

16) If an electric current is passed through a nerve the man

a) bagans to laugh b) begans to weep

c) is excited d) becomes insensitive to the pair

17) Which of the following is unit of magnetic induction?

a) T b) Wb /m^2 c) N/Am d) All of the above

18) Magnetic effect of an electric current was first observed by

a) Oersted b) Ampere c) Coulomb d) Joule

19) A bar magnet of pole strength m is cut parallel to its length into two equal parts .The pole strength of each pole is

a) m /2 b) m/4 c) 2 m d) 4 m

20) The property of attracting small piece of iron is called as magnetism and the substance which attract the iron piece is called

a) Magnesium b) Natural magnet c) Artificial magnet d) Electromagnet

21) Microwaves are used for

a) RADAR system b) T.V c) Radio transmission d) All the above

22) The upper atmosphere layer is known as

a) Troposphere b) Mesosphere c) Ionosphere d) Chromospheres

23) Which one of the following radiation has the lowest frequency?

a) Visible light b) x-rays c) Microwaves d) Ultraviolet rays

24) From the stress against strain graph, the behavior of the wire between elastic limit and yield point is

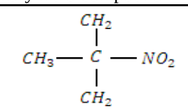
a) Perfectly elastic b) formation of neck

c) Perfectly plastic d) elastic but with permanent deformation

25) The r.m.s velocity of the gas molecules moving with velocities 2 m/s, 4 m/s and 6 m/s is

a) 2.8 m/s b) 3.0 m/s c) 3.8 m/s d) 4.32 m/s

CHEMISTRY

SR. NO.	QUESTION	OPT. A	OPT. B	OPT. C	OPT. D	CORRECT ANS.
1	The light falling on oil is dispersed into several colors due to phenomenon of	Reflection	Refraction	Diffraction	Interference	**D**
2	A wire of length 'l' and cross section area 'A' has resistance 'R'. Another wire of length'2l' and area of cross section 'A/2' will have resistance equal to	R	2R	4R	8R	**C**
3	Volume of a person of 50 kg will be	50 ml	500 ml	5 lit	50 lit	**D**
4	Primary amines are produced on the hydrolysis of	alkyl isocyanide	alkylcyanide	primary nitro compound	secondary nitro compound	**A**
5	A nitro compound is $C_4H_9NO_2$ reacts with nitrous acid to form a compound that gives a blue color solution with alkali. The nitro compound is	$CH_3CH_2CH_2CH_2NO_2$	$CH_3CHNO_2C_2H_5$		none of these	**D**
6	Hinsberg test is used to determine type of	alcohol	sugar		amine	**D**
7	The freezing point depression of 0.1 molal solution of acetic acid in benzene is 0.256 K, of benzene is 5.12 K_m^{-1}. What conclusion you draw about the molecular state of the acid?	acetic acid exist in dissociated state as CH_3COO^- and H^+	acetic acid exist as dimer is benzene	exist as single molecule	none of these	**B**
8	Which of the following is expected to show negative deviation from ideal behaviour.	carbon disulphide + ethyl acetate	pyridine + water	water + alcohol	water + nitric acid	**D**
9	When a mixture of water and milk is observed reflected light, it appears to be	White	Black	Blue	Red	**C**
10	Zig-Zag motion (eratic motion) of particles is colloid was observed by	Tyndal	Zigmondy	Robert Brown	Thomas Graham	**B**
11	A wagulating agent frequently added to water to remove the suspended and colloidal impurities is	Mohr's salt	Alum	Bleaching powder	Copper sulphate	**B**
12	The IUPAC name for benzophenone is	diphenyl ketone	1- phenyl benzene ketone	carbonyldibenzene	1,1-diphenylmethanone	**A**
13	The ions which are arranged in correct order increasing radii are	K^+, Ca^{2+}, S^{2-}	Be^{2+}, Mg^{2+}, Na^+	O^{2-}, F^-, N^{3-}	S^{2-}, O^{2-}, As^{3-}	**B**
14	For dilute solutions, Raoult's law states that	the lowering of vapour pressure is equal to the mole fraction of solute	the relative lowering of vapour pressure is proportional to the mole fraction of the solute	the relative lowering of vapour pressure is proportional to the amount of solute in solution	the vapour pressure of solution is equal to the mole fraction of solvent	**B**
15	A molal solution is the one that contains one mole of a solute in	1000g of the solvent	one litre of the solvent	one litre of the solution	224 litre of solution	**A**
16	Check the in correct statement	acetic acid is present in sour milk	Formic acid is present in sour milk	Tartaric acid is present in grapes	Citric acid is present in grapes	**A**
17	Alkalini hydrolysis of an ester is known as	Esterification	Saponification	Addition	Substitution	**B**
18	Which is one of the following is NOT an aromatic hydrocarbon	Benzene	Toluene	Oxylene	Ethylene	**D**
19	The elements Li, Na, K, Rb and Cs are known as	Transition metals	Alkali metals	Alkaline earth metals	Noble metals	**B**
20	Atoms per unit cell in simple cubic, body centered cubic and face centered cubic aer respectively	4, 2, 1	1, 4, 2	1, 2, 4	2, 1, 4	**C**
21	The current set of quantum numbers for the unpaired electron of Cl is	$3, 0, 0, I\frac{1}{2}$	$3, 1, 0, +{}^1/_2$	$2, 0, 0, +\frac{1}{2}$	$3, 1, 1, \pm\frac{1}{2}$	**D**
22	Which of the following compound is not an isonic of the other four?	n-pentane	2-methyl propane	2, 2 - dimethyl propane	2, 3 - dimethyl butane	**D**
23	Which reagent will convent ethylene to ethyl bromide	Br_2 and H_2O	HBr	HBr and $NaOH$	CH_2Br	**B**
24	Check the in correct pair	$CH_3Cl_2 - methyl\ chloride$	$CHCl_3 - chloroform$	$CH_2B_r - CH_2B_r - ethyl\ bromide$	$CCl_2 - Freon$	**C**
25	The degree of unsaturation of fat can be determined by means of	Its saponification	acrolein test	spot test	melting point	**D**

MATHEMATICS

Q.1. **if $Cos\theta = \frac{7}{25}$ and θ is in IVth quadrant then the value of $tan\theta$ is**

(A) $\frac{-24}{7}$

(B) $\frac{-25}{7}$

(C) $\frac{24}{7}$

(D) $\frac{-24}{25}$

Ans. A

Q.2. **What is the ratio of the second quantity with the first quantity in its simplest form of 1.44 m , 2.40 m**

(A) **3 : 5**

(B) **5 : 3**

(C) **2 : 5**

(D) **5 : 2**

Ans. B

Q.3. **What is length of the arc of a circle of diameter 10 cms if the arc is subtending an angle of 36° at the centre.**

(A) $2\pi\ cms$

(B) $\pi\ cms$

(C) $3\pi\ cms$

(D) $4\pi\ cms$

Ans. B

Q.4. **What is the eccentricity of the ellipse $16x^2 + 25y^2 = 400$?**

(A) $\frac{5}{3}$

(B) $\frac{3}{5}$

(C) $\frac{2}{3}$

(D) $\frac{3}{2}$

Ans. B

Q.5. **If the inclination of line is $\theta = 30^\circ$ then slope of the line is _ _ _ _ _ _ _**

(A) $\sqrt{3}$

(B) $\frac{-1}{\sqrt{3}}$

(C) $\frac{1}{\sqrt{2}}$

(D) $\frac{1}{\sqrt{3}}$

Ans. D

Q.6. The dimensions of a cuboid in cm are 16 x 14 x 20 then its total surface area is
(A) 1648 sq. cm.
(B) 1468 sq. cm.
(C) 1486 sq. cm.
(D) 1846 sq. cm.

Ans. A

Q.7. What is the value of 'm' if the point (m , 4) lies on the graph of the equation $\frac{4-3x}{4} = y$?
(A) 2
(B) -2
(C) 4
(D) -4

Ans. D

Q.8. A die is thrown 2, 3, 5 E is the event that the upper most face shows a prime number, what is E equal to?
(A) $\{1, 3, 5\}$
(B) $\{2, 3, 5\}$
(C) $\{1, 2, 3\}$
(D) $\{2, 3, 4\}$

Ans. B

Q.9. For sequence $S_n = n^2(n + 1)$ what is the value of t_1?
(A) 2
(B) 3
(C) 4
(D) 1

Ans. A

Q.10. If one root of the quadratic equation $3y^2 - ky + 8 = 0$ is 2/3 then what is the value of k?
(A) - 14
(B) 15
(C) 14
(D) -15

Ans. C

Q.11. What is the HCF and LCM of 60 and 72
(A) HCF = 12 , LCM = 360
(B) HCF = 6 , LCM = 72
(C) HCF = 24 , LCM = 60
(D) HCF = 360 , LCM = 12

Ans. A

Q.12. What is the order of the Surd $\sqrt{(31)^{1/3}}$ is

(A) 4
(B) 3
(C) 6
(D) 1

Ans. C

Q.13. What is the mean if A = 49.5 , h = 5 and $\bar{u}$ = 0.1

(A) 60
(B) 50
(C) 40
(D) 30

Ans. B

Q.14. If $\alpha+\beta=4$ and $\alpha^2+\beta^2=40$ what is the quadratic equation whose roots are α and β ?

(A) $x^2 - 4x - 12 = 0$
(B) $x^2 + 4x - 12 = 0$
(C) $x^2 - 4x + 12 = 0$
(D) $x^2 + 4x + 12 = 0$

Ans. A

Q.15. For an A.P. if $t_4 = 12$ and d = -10 then what is its general terms.

(A) 52 – 10n
(B) 50 – 10n
(C) - 52 – 10n
(D) - 50 + 10n

Ans. A

Q.16. What is the value of sec (-1200)

(A) -1
(B) -3
(C) -4
(D) -2

Ans. D

Q.17. What is the distance of the point (-2 , 3) from the line 12x = 5y + 13?

(A) 5
(B) 4
(C) 6
(D) 3

Ans. B

Q.18. What is the radius of the circle $3x^2+3y^2-6x+4y-1=0$?

(A) $\frac{3}{4}$

(B) $\frac{4}{3}$

(C) $\frac{3}{5}$

(D) $\frac{5}{3}$

Ans. B

Q.19. If the points (-3 , 11) , (6 , 2) and (k , 4) are collinear points then the value of k is
(A) 5
(B) -5
(C) 4
(D) -4

Ans. C

Q.20. What is the nature of the roots of the quadratic equation $4x^2-8x+9=0$?
(A) Real
(B) Not real
(C) Real and equal
(D) Real and unequal

Ans. B

Q.21. Which of the following is the formula for finding mean by step deviation method?

(A) $\frac{f_i x_i}{f_i}$

(B) $\frac{\sum f_i x_i}{\sum f_i}$

(C) $\overline{x} = A + \overline{d}$

(D) $\overline{x} = A + 4\overline{u}$

Ans. C

Q.22. A piece of string 175 cm in length was cut into two pieces the ratio of whose length was 5 : 2 what is the length of each piece.
(A) 100 cm , 250 cm
(B) 150 cm , 100 cm
(C) 125 cm , 50 cm
(D) 90 cm , 50 cm

Ans. C

Q.23. **If (x – 2) is a factor of $x^2 - ax + 6$ what is the value of 'a'.**

(A) **5**

(B) **6**

(C) **- 5**

(D) **4**

Ans. A

Q.24. **What is the value of $\cot^2 60° + \sin^2 45° + \sin^2 30° + \cos^2 90°$?**

(A) $\frac{14}{13}$

(B) $\frac{12}{13}$

(C) $\frac{13}{12}$

(D) $\frac{13}{14}$

Ans. C

Q.25. **What is the equation of locus of a point whose distance from (5 , 0) is equal to its distance from y axis.**

(A) $x^2 - 10y - 25 = 0$

(B) $y^2 - 10x + 25 = 0$

(C) $-10x + 25 = 0$

(D) $y^2 + 25 = 0$

Ans. B

Q.26. **What is the length of the arc of a circle with radius 0.7 m and area of the sector is 0.49 m^2.**

(A) **1.3 m**

(B) **1.5 m**

(C) **1.4 m**

(D) **1.6 m**

Ans. C

Q.27. **If $\frac{P}{q} = \frac{6}{5}$ what is the value of $\frac{q^3}{P^3 - q^3}$**

(A) $\frac{91}{125}$

(B) $\frac{81}{125}$

(C) $\frac{125}{91}$

(D) $\frac{125}{81}$

Ans. C

Q.28. Rajani has a hobby of reading books she read 22, 25, 29, 24, 20 30, 26 pages per day in a week. What is mean?

(A) 50
(B) 75
(C) 25
(D) 35

Ans. C

Q.29. If $S = \{1, 2, 3, 5, 7, 8, 9\}$ and $A = \{1, 5, 8\}$ what is A^1 =?

(A) $\{1, 5, 8\}$
(B) $\{1, 2, 3\}$
(C) $\{7, 8, 9\}$
(D) $\{2, 7, 3, 9\}$

Ans. D

Q.30. What is the value of $\frac{1}{x}+\frac{1}{y}$ if $\frac{5}{2}+\frac{9}{y}=6$ and $\frac{1}{x}+\frac{5}{y}=30$?

(A) 6
(B) - 6
(C) 4
(D) - 4

Ans. B

Q.31. For an A.P. $t_1 = 2$, $t_n = 41$ and $s_n = 860$ what is the value of n?

(A) 31
(B) 30
(C) 41
(D) 40

Ans. D

Q.32. What is median? If mean = 106 mode = 103.

(A) 104
(B) 106
(C) 105
(D) 103

Ans. C

Q.33. If θ is the acute angle between the lines $a_1x+b_1y+c_1 = 0$ and $a_2x + b_2y + c_2 = 0$ then what is tan θ?

(A) $\left|\frac{a_1b_2-a_2b_1}{a_1a_2-b_1b_2}\right|$

(B) $\left|\frac{a_1a_2-b_1b_2}{a_1b_2-a_2b_1}\right|$

(C) $\left|\frac{a_1-b_1}{a_2-b_2}\right|$

(D) $\left|\frac{a_2-b_2}{a_1-b_1}\right|$

Ans. A

Q.34. What is the length of latus – rectum of the parabola $3y^2 = 16x$

(A) $\frac{15}{2}$

(B) $\frac{16}{3}$

(C) $\frac{3}{16}$

(D) $\frac{14}{3}$

Ans. B

Q.35. The area of Δ ABC whose vertical ox A(3 , 2) B(-2 , -8) C(6 , -10) is

(A) 35 sq cm
(B) 25 sq cm
(C) 40 sq cm
(D) 50 sq cm

Ans. C

Q.36. What is θ if $\sin(\theta + 24) = \cos\theta$ where $(\theta + 24)°$ is an acute angle.

(A) 35°
(B) 33°
(C) 34°
(D) 32°

Ans. B

Q.37. If P = (-7 , 3) , Q = (-5 , 2) and R divides Seg PQ internally in the ratio 4 : 3 find co-ordinate of R.

(A) (-1 , -1)
(B) (-1 , 1)
(C) (1 , -1)
(D) (1 , 2)

Ans. C

Q.38. The diagonal of a square of $8\sqrt{2}$ cm. what is its side.

(A) 4 cm
(B) 8 cm
(C) 10 cm
(D) 2 cm

Ans. B

Q.39. What is the area of a semicircle whose radius is 21 cm.

(A) 693 cm^2
(B) 963 cm^2
(C) 396 cm^2

(D) 936 cm^2

Ans. A

Q.40. What is the distance between the points A(-6 , 13) B(9 , -7)

(A) 35
(B) 25
(C) 40
(D) 45

Ans. B

Q.41. What is the value of $\log_5 \sqrt[3]{5}$

(A) 3
(B) $2/3$
(C) $1/3$
(D) $\frac{1}{5}$

Ans. C

Q.42. What is $\frac{1}{\log_6 24} + \frac{1}{\log_{12} 24} + \frac{1}{\log_8 24} = \cdots$

(A) 3
(B) 4
(C) 2
(D) 1

Ans. C

Q.43. What is the value of $1 + i^{10} + i^{100} - i^{1000}$

(A) 0
(B) 1
(C) 2
(D) -1

Ans. A

Q.44. What is the modulus of Z = 4 + $4\sqrt{3}$ i

(A) 4
(B) 8
(C) 6
(D) 2

Ans. B

Q.45. What is 'n' if $n_{p_5} = 42(n_{p_3})$

(A) 9
(B) 10
(C) 12
(D) -3

Ans. B

Q.46. What is 'k' if $\lim_{x \to k} \frac{x^9+k^9}{x+k} = 9$

(A) ± 1

(B) ± 2

(C) ± 3

(D) 0

Ans. A

Q.47. What is $\lim_{x \to 0} \frac{\sin 5x \cdot \sin 7x}{3x^2}$

(A) $\frac{37}{3}$

(B) $\frac{35}{3}$

(C) $\frac{38}{3}$

(D) $\frac{1}{3}$

Ans. B

Q.48. What is $\lim_{x \to 0} \frac{8^x-4^x-2^x+1}{x^2}$

(A) log2

(B) log4

(C) log3

(D) (log2) (log4)

Ans. D

Q.49. If f(x) = cosecx + cotx then $f^1\left(\frac{\pi}{4}\right) = ?$

(A) $-\sqrt{2}$

(B) $-2+\sqrt{2}$

(C) $-2-\sqrt{2}$

(D) $\sqrt{2}-2$

Ans. C

Q.50. What is $\int \frac{e^{5logx}-e^{4logx}}{e^{3logx}-e^{2logx}} dx$

(A) $\frac{x^2}{2}$

(B) $\frac{x^3}{3}$

(C) $\frac{x^4}{4}$

(D) x

Ans. B

BIOLOGY

Q.NO	QUESTION
1	**The gametes produced by an individual with the genotype aaBBCc are**
OPT A	8
OPT B	4
OPT C	2
OPT D	6
COR. ANS:	C

2	**Unit of distance between genes on the chromosome is**
OPT A	C-DNA
OPT B	morgan
OPT C	centimorgan
OPT D	che-square
COR. ANS:	C

3	**Histone core is made up of**
OPT A	H_2a, H_2b, H_3 & H_4
OPT B	H_1
OPT C	H_3
OPT D	H_4
COR. ANS:	A

4	**The concept of cellular totipotency was first given by**
OPT A	Devo
OPT B	White
OPT C	Milles
OPT D	Steward
COR. ANS:	D

5	**“Golden rice” or Miracle Rice is transgenic rice, rich in**
OPT A	Vitamin B and iron
OPT B	Vitamin A and iron
OPT C	Vitamin A and Vitamin B
OPT D	Iron
COR. ANS:	B

6	**Which is a fungicide?**
OPT A	2, 4 – D
OPT B	DDT
OPT C	Bordeaux mixture
OPT D	BHC
COR. ANS:	C

7	**The organic biomass production is known as**
OPT A	Standing state

OPT B Standing crop
OPT C Humus
OPT D biofuels
COR. ANS: B

8 **Which of the following is liquid hydrocarbon**
OPT A Nicotine
OPT B caffeine
OPT C Resin
OPT D Latex
COR. ANS: D

9 **Which of the following enzymes secreted by yeast is responsible for fermentation?**
OPT A Enolase
OPT B Dehydrogenase
OPT C zymase
OPT D Invertase
COR. ANS: C

10 **Antibiotic neomycin is obtained from**
OPT A Streptomyces fradiae
OPT B S. griseus
OPT C A. fumigans
OPT D A. flavas
COR. ANS: A

11 **The restriction endonuclease enzymes are**
OPT A ECORI
OPT B Bam HI
OPT C Hind III
OPT D All of these
COR. ANS: D

12 **The human insulin manufactured by Eli lily is**
OPT A manulin
OPT B humulin
OPT C insulin
OPT D B-insulin
COR. ANS: B

13 **Most of the botanical names have been derived from**
OPT A German
OPT B Greek
OPT C Latin
OPT D Spanish
COR. ANS: C

14 **Xylem is rich in**

OPT A Starch

OPT B Lignin

OPT C Lipid

OPT D Portein

COR. ANS: B

15 **Chloroplast contains maximum quantity of**

OPT A RUDP carboxylase

OPT B Pyruvic carboxylase

OPT C Pyzuvic dehydrogenase

OPT D Pyruvic dehydrogenase

COR. ANS: A

16 **Ferrodoxin is a component of**

OPT A PSI

OPT B PS-II

OPT C Cristae

OPT D Hill's reaction

COR. ANS: D

17 **Kranz type anatomy is found in the leaves of**

OPT A most C_4 Plants

OPT B all C_4 Plants

OPT C most C_3 Plants

OPT D both A & C

COR. ANS: A

18 **The site of occurrence of enzymes of ETS in mitochondria is**

OPT A Fo Particle

OPT B matrix

OPT C innes membrance

OPT D outer membrance

COR. ANS: C

19 **How many ATP are generated in Kreb's cycle?**

OPT A 24

OPT B 22

OPT C 36

OPT D 8

COR. ANS: A

20 **The phenomenon of industrial melanism demonstrated**

OPT A reproductive isolation

OPT B geographical isolation

OPT C natural selection

OPT D shaded ‘X’ and internal fertilization

COR. ANS: C

21 Recombination results in

OPT A structural adaptation

OPT B genetic variation

OPT C sexual

OPT D mutation

COR. ANS: B

22 What is the average cranial capacity of Homoerectus?

OPT A 1450 cc

OPT B 1000 cc

OPT C 500 cc

OPT D more than 1650 cc

COR. ANS: B

23 Person suffer from red colour blindness is known as

OPT A Protanopia

OPT B Deuteranopia

OPT C Both A & B

OPT D monochromat

COR. ANS: A

24 Select the sulphur containing amino acid

OPT A Arginine

OPT B Tyrosine

OPT C Glutamic acid

OPT D Methionine

COR. ANS: D

25 Typhlosole in earthworm is related with

OPT A Excretion

OPT B Absorption

OPT C Respiration

OPT D Reproduction

COR. ANS: B

26 Oxygen dissociation curve of haemoglobin is

OPT A Sigmoid

OPT B Slope

OPT C Straight line

OPT D Parabola

COR. ANS: A

27 Mountain sickness results due to

OPT A Anaemic hypoxia

OPT B Arterial hypoxia
OPT C Lack of sufficient Hb
OPT D Lack of sufficient RBC
COR. ANS: B

28 Parasympathetic nervous system
OPT A Increase heart rate
OPT B Decrease heart rate
OPT C Originates heart beat
OPT D No effect on heart
COR. ANS: B

29 Which of the following are major phagocytic cells?
OPT A Lymphocytes
OPT B Mast cells
OPT C Macrophages
OPT D Plasma
COR. ANS: C

30 In kidney, glucose is reabsorbed mainly by
OPT A Bowman's capsule
OPT B loop of Henle
OPT C DCT
OPT D PCT
COR. ANS: D

31 Cori's cycle is associated with
OPT A Glycogen metabolism
OPT B Glucose metabolism
OPT C Protein metabolism
OPT D Fat metabolism
COR. ANS: A

32 Volkmann's canals interconnect
OPT A Bone marrow
OPT B 3^{rd} & 4^{th} Ventricle
OPT C Central Canal & 4^{th} Ventricle
OPT D Haversian Canal
COR. ANS: D

33 Pneumatic bone is formed in
OPT A Pigeon
OPT B Whale
OPT C Shark
OPT D Rana
COR. ANS: A

34 **In gout, high level of which of the following is found in blood?**

OPT A Urea
OPT B Cholesterol
OPT C Amino acid
OPT D Uric acid
COR. ANS: D

35 **In Urea Cycle which one is not required?**

OPT A Ornithine
OPT B Methionine
OPT C Citrulline
OPT D Arginine
COR. ANS: B

36 **Third ventricle of brain is called**

OPT A Lateral ventricle
OPT B Myelocoel
OPT C Diacoel
OPT D Metacoel
COR. ANS: C

37 **Nissl's granules are absent in**

OPT A Dendrite
OPT B Cyton
OPT C Axon
OPT D both A & B
COR. ANS: C

38 **Pacinian corpuscles in the skin of mammals are for**

OPT A Type of gland
OPT B Pain receptors
OPT C Naked tactile receptor
OPT D Encapsulated pressure receptor
COR. ANS: D

39 **Largest ear Ossicle is**

OPT A Incus
OPT B Stapes
OPT C Malleus
OPT D Stapedial Plate
COR. ANS: C

40 **Eyes of Cats glitter at night in due to presence of**

OPT A Luciferin
OPT B Porphyrin
OPT C Tapetum callosum

OPT D Tapetum fibrosum

COR. ANS: C

41 Which of the followings is an inhibitory hormone?

OPT A Somatostatin

OPT B STH

OPT C Thyroxine

OPT D Epinephrine

COR. ANS: A

42 The gas which is produced in rice paddy & is associated with global warming

OPT A CH_4

OPT B Cl

OPT C CO_2

OPT D H_2S

COR. ANS: A

43 The most dangerous radioactive air pollutant is

OPT A P-32

OPT B S-35

OPT C Ca-40

OPT D Sr-90

COR. ANS: D

44 A biosphere reserve preserves

OPT A Genetic resources of organisms

OPT B Wild population

OPT C Traditional life styles of tribals

OPT D All of the above

COR. ANS: D

45 Dodo, an extinet flightless bird had belong to

OPT A Mauritius

OPT B India

OPT C Peru

OPT D Africa

COR. ANS: A

46 Medium used for culturing hybridoma cells is

OPT A HAP

OPT B HAT

OPT C TAP

OPT D OSCP

COR. ANS: B

47 An autoimmune disease is

OPT A Haemophilia
OPT B Asthma
OPT C AIDS
OPT D Myaesthenia gravis
COR. ANS: D

48 **Sarcoma is cancer of**
OPT A Eptithelial tissue
OPT B Mesodermal tissue
OPT C Blood
OPT D Endometrial
COR. ANS: B

49 **Which of the following constituent is maximum in honey?**
OPT A Dextrose
OPT B levulose
OPT C Maltose
OPT D Water
COR. ANS: B

50 **Components of complements bind with the immunoglobulin at**
OPT A Fc portion
OPT B Fab region
OPT C Hinge region
OPT D A & B
COR. ANS: A

ENGLISH

Q. I.Choose the correct word (option)

1. The teacher's encouraged vinay to work hard
   (a) Compliments (b) complements (c) complaints
2. Vishwanathan Anand's excellence is chess has been a _____ to many aspirants
   (a) president (b) precedent
3. Kishore is my best friend and _____
   (a) confident (b) confidant
4. A marathon is _____

5. A race is _____
   i) a compition in which all the competitors try to be the fastest to finish first.
   ii) A running race where two or more people participate
   iii) a running race of slightly over 26 miles

Q.II. Choose the option with the word correctly spelt

6) The weight of the lungs is pressed on the _____
   i) diaphragm ii) diaphragmn iii) dyaphragym
7) We usually _____ guests with a smile
   i) receive (ii) recive (iii) receve
8) In the good old days, work gave people
   i) excercise (ii) exercise (iii) exersise

9) The medicine will _____ you of your discomfort.
   i) relieve ii) releive iii) relieve

10) The clouds cause the sun to _____
   (a) disappear (b) dissapear (c) disapear

Q.II- Choose the correct option for

11) biotic: _____
   a) The study of animals (b) The study of living beings
   c) The science of heredity (d) The study of water life
12) Platinum is _____ than diamond
   (a) cost (b) costly (c) costlier (d) costlist
13) conflagration: _____
   a) combination of atoms (b) long research report
   c) an uncontrolled fire (d) under obligation
14) Is the train's _____ time?
   a) are on (b) in (c) on (d) before
15) Confidence is _____ to build a great _____
   a) necessary, carrier (b) necessary , carrier
   c) nessaccery, carreer (d) necessary, career
16) Louis's room is in apple pie order, it means _____
   a) smelling of fruits (b) neat and tidy
   (c) apple pie spreed in every corner (d) arranged with apple pies
17) If & reveal a secret, I am _____
   a) hitting the nail on the head b) jumping on the bandwagon
   c) eating my words d) letting the cat out of the bag
18) He didn't bat an eye means he was _____
   a) surprised (b) sleepless (c) concentrating hard (d) visually chalanged

19) The robbers were armed to the teeth. So basically they
a) got a new set of teeth (b) had no armaments
c) carried a lot of weapons (d) prepared well for the robbery

20) His comments threw a wet blanket on the discuss
a) controlling (b) discouraging (c) revealing (d) surprising

21) place in a proper order: choose the correct alternative
p] with a jigsaw
q] jigsaw puzzles were originally created by painting
r] and then cutting that picture into small pieces
s] a picture on a flat rectangular piece of wood
a) psqr (b) qsrp (c) sprq (d) sqpr

Identify the figures of speed

22) He was a lion in the fight.
a) Simile b) Personification c) Hyperbole d) Metaphor

23) Water, Water, everywhere and not a drop to drink
a) repetition b) hyperbole c) alliteration d) pun

24) Death lays his icy hand on kings
a) Metaphor b) Apostrophe c) personification d) Hyperbole

25) I drank a wake-up of coffee
a) pun (b) Anticlimax c) Transferred Epithet d) Alliteration

26) 'Book' is related to author in the same way 'Food' is related to _____
a) guest b) Butter c) cook d) container

27) _____ is to Sun as Rain is to _____?
a) Moon, Rainbow b) Light, cloud c) Sky, wet d) Day, Night

28) 'Cardboard' is related to 'Opaque' in the same way as 'glass is related to _____
a) Brittle b) Lustrous c) glossy d) Transparent

29) Novel ; Epic ; Drama ; _____
a) Subject b) Literature c) poetry d) prose

30) Cotton _ fire easily
a) can catch b) catch c) may catch d) might catch

31) Hebrew is the _____ living language
a) old b) older c) oldest d) much older

Determine the correct form of verb using the time indicator as reference. Choose the correct option.

32) Animated movies _____ a lot over the last 100 years.
(a) has changed (b) have changed (c) had changed (d) will change

33) In the early 1900s, Mclay _____ his films by himself.
a) animated (b) is animating (c) will be animating (d) were animating

34) Hundreds of photographs _____ to make a one-minute film everyday in 1900s.
a) was needed (b) were needed (c) is needed (d) are needed

35) Walt Disney _____ animation to a new level since he started in the animation business.
(a) takes (b) taken (c) took (d) taking

36) He created Mickey Mouse, added sound and music to his movies, and _____ the first full length film.
a) produced (b) produces (c) have produced (d) had produced

Fill in the blanks with suitable modal auxiliaries

37) One _____ to respect parents and elders.
a) ought (b) should (c) must (d) could

38) I am afraid it _____ rain shortly
a) can (b) may (c) might (d) must

39) They _____ not show their faces here
(a) must (b) can (c) dare (d) could

Count punctuation mistakes:

40) After careful thinking the government of Maharashtra took the decision to make English a compulsory subject from the 1st standard

a) 8 (b) 5 (c) 3 (d) 4

41) According to a report appearing in the time of india this morning Mumbai city is expected to receive heavy rains on Sunday.

(a) 7 (b) 8 (c) 9 (d) 6

42) It was a RECORD, means

a) disc which contain movies (b) written statement

c) Highest achievement (d) never broken

43) You will definitely _____ a Ist class.

a) get (b) obtain (c) score (d) Receive

44) The _____ of the Empire was hastened due to the death of emperor.

a) decline (b) fall (c) end (d) collapse

Use of proper co-relative conjunctions:

45) The government sent a spy _____ obtain information.

(a) to get (b) in order to (c) to (d) as to

46) She was praised by her boss _____ she gives the highest importance to her work.

a) when b) since c) as d) when

47) There is no alternative _____ we may as well keep quiet.

a) as b) and c) or d) so

48) He is not obedient _____ his parents.

a) towards (b) with (c) for d) of

49) Ustad Bismillah Khan was unique _____

a) in b) among (c) from (d) by

50) As a citizen one must be acquainted _____ rights and duties

a) from (b) in c) at d) with

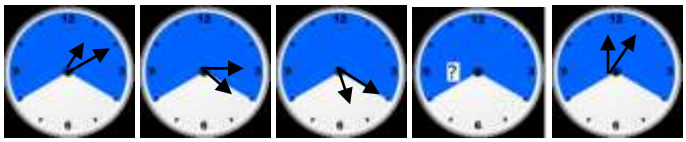
51) They were touched _____ the sight of suffering

a) on (b) at c) by (d) for

from q32:(1)b(2)a(3)b(4)c(5)a(6)a(7)b(8)c(9)b(10)a(11)c(12)a(13)b(14)b(15)c(16)c(17)a(18)b(19)d(20)b

LOGIC

1. looking at the following clocks, where should the missing clock hand point?



(a) 2 (b) 8 (c) 4 (d) 12

2. Coffee in a cup is “97% caffeine free”. How many cups will contain the amount of caffeine that is usually present in one cup.
(a) 33.34 (b) 1.03 (c) 3 (d) 4

3. If all GOOD are BAD and no HUMAN is BAD then which of the following is true
(a) ALL HUMAN are GOOD (b) Some HUMAN are GOOD
(c) No HUMAN is GOOD (d) None of the above

4. If PEN : : WRITE then
(a) PAGE : : BOOK (B) SEAT : : CAR (C) GLASS : : WINDOW (D) LEG : : RUN

5. A girl points towards a woman and said, “Her husband is brother-in-law of my father’s daughter”. What is the relationship between them.
(a) Daughter-Mother (B) Sisters (C) Aunt-Niece (D) Grand- mother & Grand-daughter

6. Choose the odd one out
(a) Eye (b) Ear (c) Teeth (D) Nose

7. Arrange the given words in alphabetical order and tick one that comes third from left.
(a) Application (b) Apply (C) Apple (D) Appliance

8. If PLEASE is coded as KOVZHV then HAPPY is coded as
(a) SQRRS (b) SKZZO (c) SZKKA (D) SZKKB

9. What is the most important in exam.
(a) examiner (b) prize (c) success (d) examinee

10.If 5+3+2=151022 , 9+2+4=283652 , 8+6+3=482466 , 5+4+5=202541 then 9+5+5=_____?
(a) 454580 (b) 454585 (c) 452570 (d) 451459

11. Five students are sitting in a row ‘A” is to the left of C, D is to the right of C. ‘E’ is sitting at the right end and B is between A and C. Who is in the middle?
(a) A (b) B (c) C (d) D

12. “Yesterday I saw an ice cube which had already melted due to the heat of a nearby furnace”.
The above statement is true
(a) Always (b) Sometimes (c) Often (d) Never

13. ‘Delhi is to the North of Bhopal’. If a student puts up the map such that East become North wrongly then in which direction Bhopal is with respect to Delhi?
(a) East (b) West (c) North (d) South

14. 3 years ago, the average of a family of 5 members was 17years. A baby having been born, the average age of the family is the same today. The present age of the baby is

(a) 1 years (b) $1\frac{1}{2}$ years (c) 2 years (d) 3 years

15. Sachin is younger than Rahul by 4 years. If their ages are in the respective ratio of 7 : 9, hour old is sachin?

(a) 16 years (b) 18 years (c) Can't be determined (d) None

16. What is the angle between the hour hand & minute hand of a clock at 6 : 15

(a) 90^{o} (b) 96 (c) 97 30′ (d) 97 30

17. If some students are Girls and all Girls are Beautiful then

(a) All Beautiful Girls are students (b) All students are Beautiful

(c) Some Beautiful students are not Girls (d) None

18. If ACID is coded as 17 and BASE as 27 then WATER is

(a) 67 (b) 44 (c) 22 (d) None of the above

19. Ramaniyan was a _____ Indian Mathematician

(a) big (b) very big (c) great (d) huge

20. Erin is twelve years old. For three years, she has been asking her parents for a dog. Her parents have told her that they believe a dog would not be happy in an apartment, but they have given her permission to have bird. Erin has not yet decided what kind of bird she would like to have.

(a) Erin's parents like birds better than they like dogs.

b) Erin doesn't like birds

c) Erin and her parents live in an Apartment

d) Erin and her parents would like to move

21. Odometer is to mileage as compass to

(a) speed (b) hiking (c) needle (d) direction

22. Here are some words translated from an artificial language gorblflur means fan belt, pixngorbl means ceiling fan arthtusl means tile roof.

(a) gorbltusl (b) flurgorbl (c) arthflur (d) pixnarth

23. Which of the following is an essential part of "monopoly".

(a) corrupt (b) exculsive (c) rich (d) gigantic

24. If a person can read a novel in 10 hour then how much time will be taken by 05 person to read it.

(a) 2 hours (b) 05 hours (c) 10 hours (d) None of the above

25. In a running race if the person on 5^{th} rank overtakes the 4^{th} rank then what is his rank now.

(a) 3^{rd} (b) 4^{th} (c) 5^{th} (d) Can't say

* * * * * * * *

GENERAL KNOWLEDGE

Q1: The Reserve Bank of India (RBI) acts as a bankers' bank. This would imply which of the following?
1. Other banks retain their deposits with the RBI.
2. The RBI lends funds to the commercial banks in times of need.
3. The RBI advises the commercial banks on monetary matters.
Select the correct answer using the codes given below:
(a) 2 and 3 only (b) 1 and 2 only
(c) 1 and 3 only (d) 1, 2 and 3

Ans. (b)

Q2: With reference to the religious history of medieval India, the Sufi mystics were known to pursue which of the following practices?
1. Meditation and control of breath
2. Severe ascetic exercises in a lonely place
3. Recitation of holy songs to arouse a state of ecstasy in their audience
Select the correct answer using the codes given below:
(a) 1 and 2 only (b) 2 and 3 only
(c) 3 only (d) 1, 2 and 3

Ans. (c)

Q3: The Lahore Session of the Indian National Congress (1929) is very important in history, because:
1. the Congress passed a resolution demanding complete independence
2. the rift between the extremists and moderates was resolved in that Session
3. a resolution was passed rejecting the two-nation theory in that Session
Which of the statements given above is/are correct?
(a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) None of the above

Ans. (a)

Q4: How do you distinguish between Kuchipudi and Bharatanatyam dances?
1. Dancers occasionally speaking dialogues is found in Kuchipudi dance but not in Bharatnatyam.
2. Dancing on the brass plate by keeping the feet on its edges is a feature of Bharatanatyam but Kuchipudi dance does not have such a form of movements.
Which of the statements given above is/are correct?
(a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2

Ans. (a)

Q5: Exposure to sunlight helps a person improve his health because

a. the infrared light kills bacteria in the body

b. resistance power increases

c. the pigment cells in the skin get stimulated and produce a healthy tan

d. the ultraviolet rays convert skin oil into Vitamin D

Ans(d)

Q6: The increasing amount of carbon dioxide in the air is slowly raising the temperature of the atmosphere, because it absorbs:

(a) the water vapour of the air and retains its heat
(b) the ultraviolet part of the solar radiation
(c) all the solar radiations
(d) the infrared part of the solar radiation
Ans. (d)

Q7: Which of the following is/are among the Fundamental Duties of citizens laid down in the Indian Constitution?
1. To preserve the rich heritage of our composite culture
2. To protect the weaker sections from social injustice
3. To develop the scientific temper and spirit of inquiry
4. To strive towards excellence in all spheres of individual and collective activity
Select the correct answer using the codes given below:
(a) 1 and 2 only (b) 2 only
(c) 1, 3 and 4 only (d) 1, 2, 3 and 4
Ans. (c)

Q8: The Prime Minister of India, at the time of his/her appointment:
(a) need not necessarily be a member of one of the Houses of the Parliament but must become a member of one of the Houses within six months
(b) need not necessarily be a member of one of the Houses of the Parliament but must become a member of the Lok Sabha within six months
(c) must be a member of one of the Houses of the Parliament
(d) must be a member of the Lok Sabha
Ans. (a)

Q9: Normally, the temperature decreases with the increase in height from the Earth's surface, because
1. the atmosphere can be heated upwards only from the Earth's surface
2. there is more moisture in the upper atmosphere
3. the air is less dense in the upper atmosphere
Select the correct answer using the codes given below:
(a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
Ans. (a)

Q10: Which of the following provisions of the Constitution of India have a bearing on Education?
1. Directive Principles of State Policy
2. Rural and Urban Local Bodies
3. Fifth Schedule
4. Sixth Schedule
5. Seventh Schedule
Select the correct answer using the codes given below:
(a) 1 and 2 only (b) 3, 4 and 5 only

(c) 1, 2 and 5 only (d) 1, 2, 3 4 and 5
Ans. (a)

Q11: Mahatma Gandhi undertook fast unto death in 1932, mainly because
(a) Round Table Conference failed to satisfy Indian political aspirations
(b) Congress and Muslim League had differences of opinion
(c) Ramsay Macdonald announced the Communal Award
(d) None of the statement (a), (b) and (c) given above is correct in this contex
Ans. (c)

Q12: Vultures which used to be very common in Indian countryside some years ago are rarely seen nowadays. This is attributed to
(a) The destruction of their nesting sites by new invasive species
(b) A drug used by cattle owners for treating their diseased cattle
(c) Scarcity of food available to them
(d) a widespread, persistent and fatal disease among them
Ans. (b)

Q13: 15. In which one among the following categories of protected areas in India are local people not allowed to collect and use the biomass?
(a) Biosphere Reserves
(b) National Parks
(c) Wetlands declared under Ramsar Convention
(d) Wildlife Sanctuaries
Ans. (b)

Q14: 12. Consider the following protected areas :
1. Bandipur
2. Bhitarkanika
3. Manas
4. Sunderbans
Which of the above are declared Tiger Reserves?
(a) 1 and 2 only (b) 1, 3 and 4 only
(c) 2, 3 and 4 only (d) 1, 2, 3 and 4
Ans. (b)

Q15: Who helped to bring the Olympic flame to Britain along with 5 young Britons as a formal handover ceremony in Athens, London 2012 on 18th May 2012?
a. David Beckham
b. Andrew Flintoff
c. Jonathan Trott
d. Andrew Strauss
Ans.(a)

Q16: Which country's President has been fined $17,000 by its electoral authorities for urging his Facebook followers on polling day to vote for him?

a.Pakistan(President Asif Ali Zardari)
b. Taiwan (President Ma Ying-jeou)
c.China(President Hu Jintao)
d.Srilanka(President Mahinda Rajapaksha)
Ans (b)

Q17: Name the child actor who acted in movie 'Paa' died in the Nepal plane crash recently.
a.Fizan
b.Darshil Safari
c.Dhairya
d.Taruni Sachdev
Ans(d)

Q18: Name the Indian American who has been named as Chancellor of University of California.
a.Nathalia Kaur
b.Hill Krishnan

c.Pradeep Khosla
d.Shubhankar Jain
Ans(c)

Q19: How many lions are there in national emblem of India?

a.3
b.4
c.2
d.6
Ans(b)

Q20: Which Oscar-winning musician has been conferred with his first American Honorary Doctorate by the Miami University?

a.A.R.Rahman
b.Lata Mangeshkar
c.Zakir Hussain
d.Bappi Lahiri
Ans(a)

Q21: When was the World Red Cross day celebrated?

a.April 10th
b.May 10th
c.April 8th
d. May 8th
Ans(d)

Q22: Who is President of France?

a. Nicolas Sarkozy
b.George Bush
c.Francois Hollande
d.David Cameron
Ans(c)

Q23: **Who became the first cricketer to hit 5 consecutive T20 fifties?**
a. Chris Gayle
b.Virender Sehwag
c. Sachin Tendulkar
d. Shane Watson

Ans(b)

Q24: **Which state's Chief Minister has demanded law to deal with cases of discrimination against northeastern students?**
a.Uttar Pradesh CM Akhilesh Yadav
b.Meghalaya CM Mukul Sangma
c.Maharashtra CM Chavan
d.Gujrat CM Narendra Modi

Ans(b)

Q25: “Inquilab Zindabad” slogan was given by

a. Sir. Mohammed Iqbal
b. Lala Lajpat Rai
c. Bhagat Singh
d. Subhas Chandra Bose

Ans(a)

Q1:The headquarter of International Atomic Energy Agency (IAEA) are situated at

a.Vienna b.Geneva

c. Rome d. Paris

Ans(a)

Q2:The term which denotes that each side has made equal point at game point, in Tennis, is referred to as

a.baseline b.deuce

c. fault d.grand slam

Ans(b)

Q3: "India House" is located in—
(A) New Delhi
(B) Kolkata
(C) London
(D) New York
Answer: (C)

Q4:The abbreviation TRAI stands for—
(A) Taxation Research and Analysis Institute
(B) 'Tourist Resorts ' Agents of India
(C) Telecom Regulatory Authority of India
(D) Trade Related Accounts and Indices
Answer: (C)

Q5: Name the inventor of ATM who died recently—
(A) John Shepherd Barron
(B) Leszek Miller
(C) Ada E. Yonuth
(D) Willard S. Boyal
Answer: (A)

Q6: Which one of the following sets of elements was primarily responsible for the origin of life on the Earth?
(a) Hydrogen, Oxygen, Sodium (b) Carbon, Hydrogen, Nitrogen
(c) Oxygen, Calcium, Phosphorus (d) Carbon, Hydrogen, Potassium
Ans. (b)