

**CAREER ACADEMY TALENT SEARCH EXAM
CLASS-12TH (MEDICAL & NON-MEDICAL) (SET-A)**

9. A parallel plate capacitor is charged and then isolated. On increasing the plate separation–

Charge	Potential	Capacitance
(A) remains constant	remains constant	decreases
(B) remains constant	increases	decreases
(C) remains constant	decreases	increases
(D) increases	increases	decreases

10. An aeroplane having a distance of 50 m between the edges of its wings is flying horizontally with a speed of 720 km/hour. If the vertical component of the earth's magnetic field is 2×10^{-4} Wb/m², then the induced emf will be –

- (A) 2mV (B) 2V
(C) 200V (D) 0.2mV

ANSWER-KEY

- 1.(B) 2.(A) 3.(A) 4.(A) 5.(C) 6.(C)
7.(A) 8.(D) 9.(B) 10.(C)

CHEMISTRY

11. The most unsymmetrical crystal system is:

- (A) Cubic (B) Hexagonal
(C) Triclinic (D) Orthorhombic

12. Tetragonal crystal system has the following unit cell dimensions:

- (A) $a = b = c$ and $\alpha = \beta = \gamma = 90^\circ$
(B) $a = b \neq c$ and $\alpha = \beta = \gamma = 90^\circ$
(C) $a \neq b \neq c$ and $\alpha = \beta = \gamma = 90^\circ$
(D) $a = b \neq c$ and $\alpha = \beta = 90^\circ, \gamma = 120^\circ$

13. What is the mole fraction of ethylene glycol in a solution containing 20g by mass?

- (A) 0.022 (B) 0.054
(C) 0.068 (D) 0.090

14. Mg metal is extracted from

- (A) Cryolite (B) Carnallite
(C) Malachite (D) Cassiterite

15. A metal obtained by a hydrometallurgical operation is :

- (A) Silver (B) Iron
(C) Tin (D) Aluminium

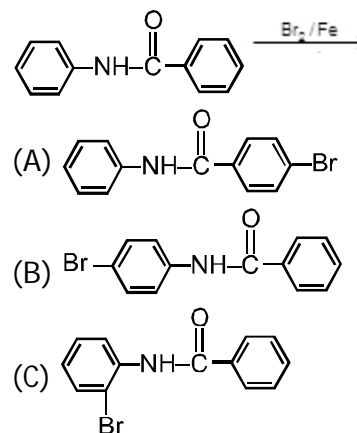
16. Which of the following can act as nucleophile :

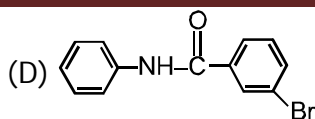
- (A) $\text{C}^{\ominus}\text{H}_3$ (B) $\text{N}^{\ominus}\text{H}_3$
(C) I^- (D) All of these

17. Glucose can be tested by following -

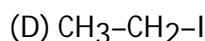
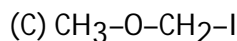
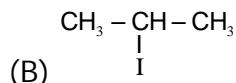
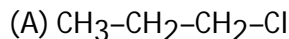
- (A) Tollen's reagent
(B) Fehling's solution
(C) Both of these
(D) None of these

18. The major product obtained in the following is :

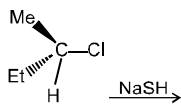




19. Which of the following compound will undergoes fastest S_N2 reaction?



20. For the reaction,



- (A) a single stereoisomer with Same configuration will be formed
 (B) racemic mixture will be produced
 (C) a single stereoisomer with opposite optical rotation will be formed
 (D) a single stereoisomer will be formed

ANSWER-KEY

11.(C) 12.(B) 13.(C) 14.(B) 15.(A)
 16.(D) 17.(C) 18.(B) 19.(C) 20.(D)

MATHEMATICS

21. If $\begin{vmatrix} 2x & 5 \\ 8 & x \end{vmatrix} = \begin{vmatrix} 6 & -2 \\ 7 & 3 \end{vmatrix}$, then value of x is

- (A) 3 (B) ± 3
 (C) ± 6 (D) 6

22. If $y^2 = \sin x + y$ then $\frac{dy}{dx}$ equal to

- (A) $\frac{\cos x}{2y-1}$ (B) $\frac{\cos x}{1-2y}$
 (C) $\frac{\sin x}{1-2y}$ (D) $\frac{\sin x}{2y-1}$

23. The value of $\cos^{-1}\left(\cos\left(\frac{43\pi}{5}\right)\right)$ is

- (A) $\frac{3\pi}{5}$ (B) $\frac{-7\pi}{5}$
 (C) $\frac{\pi}{10}$ (D) $-\frac{\pi}{10}$

24. Let $f : N \rightarrow N$ be defined as
 $f(x) = \begin{cases} x + 1, & \text{if } x \text{ is odd} \\ x - 1, & \text{if } x \text{ is even} \end{cases}$

Choose the correct answer

- (A) f is one-one onto
 (B) f is many - one onto
 (C) f is one - one but not onto
 (D) f is neither one - one nor onto

25. Let $f(x) = \begin{cases} k \cos x, & \text{if } x \neq \frac{\pi}{2} \\ \frac{\pi - 2x}{3}, & \text{if } x = \frac{\pi}{2} \end{cases}$

is continuous at $x = \frac{\pi}{2}$, then the value of k is

- (A) 2 (B) 3
 (C) 6 (D) $3/2$

26. At $x = \frac{5\pi}{6}$, $f(x) = 2\sin 3x + 3\cos 3x$ is

- (A) maximum
 (B) minimum
 (C) zero
 (D) neither maximum nor minimum

27. If A is a square matrix such that $A^2 = I$, then

$(A-I)^3 + (A+I)^3 - 7A$ is equal to

- (A) A (B) $I - A$
 (C) $I + A$ (D) $3A$

28. The length x of a rectangle is decreasing at the rate of 3cm/min and the width y is increasing at the rate of 2cm/min .

When $x = 10\text{cm}$ and $y = 6\text{cm}$, the rate of change of area of the rectangle is

- (A) $10\text{ cm}^2/\text{min}$ (B) $2\text{ cm}^2/\text{min}$
 (C) $5\text{ cm}^2/\text{min}$ (D) $1\text{ cm}^2/\text{min}$

29. Let $f : [0, 1] \rightarrow [0, 1]$ be defined by

$$f(x) = \begin{cases} x, & \text{if } x \text{ is rational} \\ 1 - x, & \text{if } x \text{ is irrational} \end{cases}$$

then $(f \circ f)x$ is

- (A) constant (B) $1 + x$

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- (C) x (D) none of these
30. Let $f(x) = |\cos x|$. Then,
 (A) f is everywhere differentiable
 (B) f is everywhere continuous but not differentiable at $x = n\pi, n \in Z$.
 (C) f is everywhere continuous but not differentiable at $x = (2n + 1)\frac{\pi}{2}, n \in Z$
 (D) none of these

ANSWER-KEY

- 21.(C) 22.(A) 23.(A) 24.(A) 25.(C)
 26.(D) 27.(A) 28.(B) 29.(C) 30.(C)

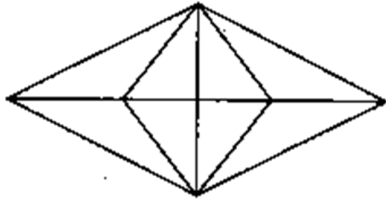
BIOLOGY

21. *Strobilanthes kunthiana* differs from bamboo in
 (A) being monocarpic
 (B) length of juvenile phase
 (C) being polycarpic
 (D) none of these.
22. The sequence of development of embryo sac is
 (A) archesporium → megaspore → megasporangium → embryosac
 (B) archesporium → megaspore → megaspore mother cell → embryo sac
 (C) archesporium → megaspore mother cell → megaspore → embryo sac
 (D) megaspore mother cell → archesporium → megaspore → embryo sac
23. The 'cells of Rauber' are
 (A) secretory cells of endometrium in uterus
 (B) inner cell mass of blastocoel
 (C) outer cells of trophoblast in contact with uterine wall
 (D) cells of trophoblast, in contact with inner cell mass of blastocyst.

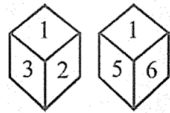
24. Match the contraceptive methods given under Column I with their examples given under Column II. Select the correct choice from those given below.
- | | |
|------------------|---|
| Column I | Column II |
| A. Chemical | p. Tubectomy and vasectomy |
| B. IUDs | q. Copper T and loop |
| C. Barriers | r. Condom and cervical foam |
| D. Sterilization | s. Spermicidal jelly and foam |
| | t. Coitus interruptus and calendar method |
- (A) A=s, B=q, C=r, D=p
 (B) A=s, B=t, C=q, D=r
 (C) A=p, B=r, C=q, D=t
 (D) A=s, B=q, C=t, D=p
25. Cri-du-chat syndrome in humans is caused by the
 (A) trisomy of 21st chromosomes
 (B) fertilization of an XX egg by a normal Y-bearing sperm
 (C) Loss of half of the short arm of chromosome 5
 (D) Loss of half of the long arm of chromosome 5
26. What is the correct sequence of sperm formation?
 (A) Spermatogonia, spermatozoa, spermatocytes, spermatids
 (B) Spermatogonia, spermatocytes, Spermatids, spermatozoa
 (C) Spermatids, spermatocytes, Spermatogonia, spermatozoa
 (D) Spermatogonia, spermatocytes, spermatozoa, spermatids.
27. Match Column I with Column II and find the correct answer.
- | | |
|-----------------|------------------|
| Column I | Column II |
| A. Monoploidy | 1. $2n-1$ |
| B. Monosomy | 2. $2n+1$ |

CAREER ACADEMY TALENT SEARCH EXAM
CLASS-12TH (MEDICAL & NON-MEDICAL) (SET-A)

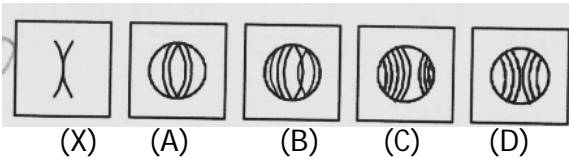
35. How many triangles are there in the following figure?



36. The number on the opposite side of the face having the number 4 will be



- (A) 10 (B) 14
(C) 24 (D) 20
- (a) 1 (b) 2
(c) 5 (d) 6
37. A man travels 4 km due North, then travels 6 km due East and further travels 4 km due North. How far he is from the starting point ?
- (A) 6 km (B) 14 km
(C) 8 km (D) 10km
38. In each of the following questions, you are given a figure (X) followed by four alternative figures (1),(2),(3) and (4) such that figure (X) is embedded in one of them. Trace out the alternative figure which contains figure (X) as its part



39. In a cricket match, Sachin scored more runs than Rahul but not as Kiran. Vinod scored less than Rahul but more than Gagan and Anand. Whose score was the lowest in the match?
- (A) Rahul (B) Gagan
(C) Anand (D) Either Gagan or Anand

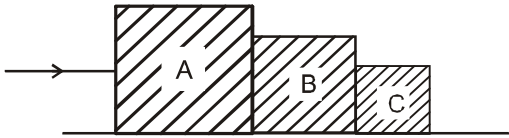
40. A and B start walking from the same point. A goes North and covers 3 km; then turns right and covers 4 km. B goes west and covers 5km, then turns right and covers 3 km. how far apart are they from each other?

(A) 10km (B) 9 km
(C) 8km (D) 5 km

ANSWER-KEY

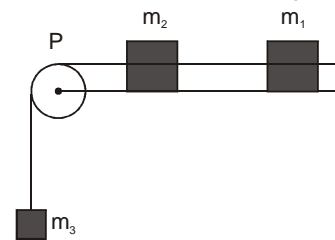
31.(A) 32.(D) 33.(B) 34.(B) 35.(C)
36.(A) 37.(D) 38.(D) 39.(D) 40.(B)

PHYSICS

- The position x of a particle with respect to time t along x -axis is given by $x = 9t^2 - t^3$ where x is in metre and t in second. What will be the position of this particle when it achieves maximum speed along the $+x$ direction?
 (A) 32 m (B) 54 m
 (C) 81 m (D) 24 m
- A car of mass 1000 Kg negotiates a banked curve of radius 90 m on a frictionless road. If the banking angle is 45° , the speed of the car is :
 (A) 20 ms^{-1} (B) 30 ms^{-1}
 (C) 5 ms^{-1} (D) 10 ms^{-1}
- A plane flying horizontally at a height of 1500 m with a velocity of 200 ms^{-1} passes directly overhead an anti-aircraft gun. Then the angle with the horizontal at which the gun should be fired for the shell with a muzzle velocity of 400 m s^{-1} to hit the plane, is -
 (A) 90° (B) 60°
 (C) 30° (D) 45°
- Three blocks A, B and C of masses 4 kg, 2 kg and 1 kg respectively, are in contact on a frictionless surface, as shown. If a force of 14 N is applied on the 4 kg block then the contact force between A and B is :

 (A) 6 N (B) 8 N
 (C) 18 N (D) 2 N
- A system consists of three masses m_1 , m_2 and m_3 connected by a string passing over a pulley P. The mass m_3 hangs freely

and m_2 and m_1 are on a rough horizontal table (the coefficient of friction $=\mu$). The pulley is frictionless and of negligible mass. The downward acceleration of mass m_1 is :

(Assume $m_1 = m_2 = m_3 = m$)



- (A) $\frac{g(1-g\mu)}{9}$ (B) $\frac{2g\mu}{3}$
 (C) $\frac{g(1-2\mu)}{3}$ (D) $\frac{g(1-2\mu)}{2}$
- One watt-hour is equivalent to -
 (A) 3.6×10^3 Joule
 (B) 3.6×10^{-3} Joule
 (C) 6.3×10^3 Joule
 (D) 6.3×10^{-3} Joule
- A particle is moving such that its position coordinates (x,y) are $(2m, 3m)$ at time $t = 0$, $(6m, 7m)$ at time $t = 2s$ and $(13m, 14m)$ at time $t = 5s$, Average velocity vector (\vec{v}_{av}) from $t = 0$ to $t = 5s$ is :
 (A) $\frac{1}{5}(13\hat{i} + 14\hat{j})$ (B) $\frac{7}{3}(\hat{i} + \hat{j})$
 (C) $2(\hat{i} + \hat{j})$ (D) $\frac{11}{5}(\hat{i} + \hat{j})$
- An experiment measures quantities x , y , z and then t is calculated from the data as $t = \frac{xy^2}{z^3}$. If percentage errors in x , y and z are respectively 1%, 3%, 2%, then percentage error in t is :
 (A) 10 % (B) 4 %
 (C) 7 % (D) 13 %

**CAREER ACADEMY TALENT SEARCH EXAM
CLASS-11TH (MEDICAL & NON-MEDICAL)(SET-B)**

9. A parachutist after bailing out falls 50 m without friction. When parachute opens, it decelerates at 2 m/s^2 . He reaches the ground with a speed of 3 m/s. At what height approximately, did he bail out?
(A) 91 m (B) 182 m
(C) 293 m (D) 111 m

10. A 120 m long train is moving towards west with a speed of 10 m/s. A bird flying towards east with a speed of 5 m/s crosses the train. The time taken by the bird to cross the train will be -
(A) 16 sec (B) 12 sec
(C) 10 sec (D) 8 sec

ANSWER-KEY

- 1.(B) 2.(B) 3.(B) 4.(A) 5.(C) 6.(A)
7.(D) 8.(D) 9.(C) 10.(D)

CHEMISTRY

11. Orbital angular momentum of an electron is $\sqrt{3} \frac{h}{\pi}$. Then, the number of orientations of this orbital in space are :
(A) 3 (B) 5
(C) 7 (D) 9

12. The radius of an atomic nucleus is of the order of-----
(a) 10^{-10} cm (b) 10^{-13} cm
(c) 10^{-15} cm (d) 10^{-8} cm

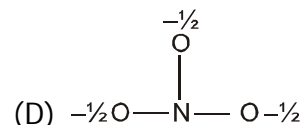
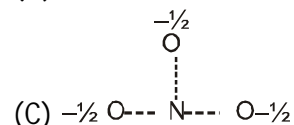
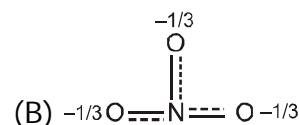
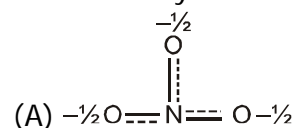
13. A gas XH_2 has molar mass 34 g/mol. What is the molar mass of XO_3 (nearly) ?
(A) 64 g/mol
(B) 82 g/mol
(C) 80 g/mol
(D) cannot be found

14. How many grams of Sodium dichromate ($\text{Na}_2\text{Cr}_2\text{O}_7$) should be added to a 50 mL volumetric flask to prepare 0.025 M

$\text{Na}_2\text{Cr}_2\text{O}_7$ solution, when the flask is filled upto the mark with water?
[Mole concept]
(A) 0.3375 g
(B) 1.25 g
(C) 337.5 g
(D) Cannot Be determined

15. The molarity of a HCl solution, which is 1.825 % (w/v) is :
(A) M/10 (B) M/2
(C) M/5 (D) M/20

16. Resonance hybrid of nitrate ion is :



17. Correct order of bond length is
(A) $\text{CO}_3^{2-} > \text{CO}_2 > \text{CO}$
(B) $\text{CO}_2 > \text{CO} > \text{CO}_3^{2-}$
(C) $\text{CO} > \text{CO}_2 > \text{CO}_3^{2-}$
(D) None of these

18. Aluminium is usually found in +3 oxidation state. In contrast, thallium exists in +1 and +3 oxidation states. This is due to :
(A) inert pair effect
(B) lanthanoid contraction
(C) diagonal relationship
(D) lattice effect

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CLASS-11TH (MEDICAL & NON-MEDICAL)(SET-B)**

19. In general, the properties that decrease and increase down a group in the periodic table, respectively, are :
 (A) atomic radius and electronegativity
 (B) electronegativity and atomic radius
 (C) electron gain enthalpy and electronegativity
 (D) electronegativity and electron gain enthalpy
20. Number of moles of electrons taken up when 1 mole of NO_3^- ions is reduced to 1 mole of NH_2OH is :
 (A) 2 (B) 4
 (C) 5 (D) 6

ANSWER-KEY

- 11.(C) 12.(B) 13.(C) 14.(A) 15.(B)
 16.(B) 17.(A) 18.(A) 19.(B) 20.(B)

MATHEMATICS

21. All subsets of $A = \{1, 2, 3\}$ is
 (A) $\phi, \{1\}, \{2\}, \{3\}$
 (B) $\phi, \{1\}, \{2\}, \{3\}, \{1\}\{2\}\{3\}$
 (C) $\phi, \{1\}, \{2\}, \{3\}, \{1, 2\}, \{1, 3\}, \{2, 3\}, \{1, 2, 3\}$
 (D) $\{1\}, \{2\}, \{3\}, \{1, 2\}, \{1, 3\}, \{2, 3\}, \{1, 2, 3\}$
22. If $\tan \theta = \frac{-4}{3}$, then $\sin \theta$ is
 (A) $\frac{-4}{5}$ but not $\frac{4}{5}$ (B) $\frac{-4}{5}$ or $\frac{4}{5}$
 (C) $\frac{4}{5}$ but not $-\frac{4}{5}$ (D) none of these
23. Let $P(n) : "2^n < (1 \times 2 \times 3 \times \dots \times n)"$. Then the smallest positive integer for which $P(n)$ is true is
 (A) 1 (B) 2
 (C) 3 (D) 4
24. The domain and Range of the real function defined by $f(x) = \sqrt{9 - x^2}$ is.
 (A) Domain: $[-3, 3]$ Range: $[0, 3]$
 (B) Domain: $(-\infty, -3) \cup (3, \infty)$, Range: $[0, \infty)$

- (C) Domain: $\{-3, 3\}$, Range: $[0, 3]$
 (D) Domain: $(-3, 3)$, Range: $(-\infty, 0]$
25. Ravi obtained 70 and 75 marks in first two unit test. Find the minimum marks he should get in the third test to have an average of at least 60 marks.
 (A) $x \geq 35$ (B) $x \leq 35$
 (C) $x \geq 30$ (D) $x \leq 30$
26. The number of words which can be formed out of the letters of the word ARTICLE, so that vowels occupy the even place is
 (A) 72 (B) 144
 (C) 7! (D) ${}^4C_4 \times {}^3C_3$
27. The multiplicative inverse of $2 - 3i$ is
 (A) $2 + 3i$ (B) $\frac{2}{13} + \frac{3}{13}i$
 (C) $\frac{2}{\sqrt{13}} + \frac{3}{\sqrt{13}}i$ (D) $\frac{2}{13} - \frac{3}{13}i$
28. In a school there are 20 teachers who teach mathematics or physics. Of these, 12 teach mathematics and 4 teach both physics and mathematics. How many teach physics?
 (A) 10 (B) 12
 (C) 8 (D) 4
29. If t_n denotes the nth term of the series $2 + 3 + 6 + 11 + 18 + \dots$ then t_{50} is
 (A) $49^2 - 1$ (B) 49^2
 (C) $50^2 + 1$ (D) $49^2 + 2$
30. The expression $\left(x + (x^3 - 1)^{\frac{1}{2}}\right)^5 + \left(x - (x^3 - 1)^{\frac{1}{2}}\right)^5$ is a polynomial of degree
 (A) 5 (B) 6
 (C) 7 (D) 8

ANSWER-KEY

**21.(C) 22.(B) 23.(D) 24.(A) 25.(A)
26.(B) 27.(B) 28.(C) 29.(D) 30.(C)**

BIOLOGY

- 21.** Which of the following sets does not contain defining characteristics of living organisms?
 (A) Growth and reproduction
 (B) Metabolism and cellular level of organization.
 (C) Response to stimuli and consciousness
 (D) All of these.

- 22.** Match the locomotory organ given under column-I with phylum which they are seen, listed under column-II and choose the option which gives the correct combination.

COLUMN I	COLUMN II
A Pseudopodia	p. Mollusca
B Parapodia	q. Chondrichthyes
C Muscular foot	r. Protozoa
D Fins	s. Annelids

- (A) A=r, B=p, C=s, D=q
 (B) A=p, B=r, C=s, D=q
 (C) A=s, B=r, C=q, D=p
 (D) A=r, B=s, C=p, D=q

- 23.** Match the following and select the correct combination from the options given below:-

Column I	Column II
A. Underground stem	1. Euphorbia
B. Stem tendril	2. Opuntia
C. Stem thorns	3. Potato
D. Flattened stem	4. Citrus
E. Fleshy cylindrical	5. Cucumber stem

- (A) A-1, B-2, C-3, D-5, E-4
 (B) A-2, B-3, C-4, D-5, E-1
 (C) A-3, B-4, C-5, D-1, E-2
 (D) A-3, B-5, C-4, D-2, E-1

- 24.** Consider the following statements and choose the correct option.
 (A) The thread like cytoplasmic strands, running from one cell to other are known as plasmodesmata.
 (B) Xylem and phloem constitute the vascular bundles of the stem.
 (C) The first formed xylem elements are described as metaxylem.
 (D) Radial vascular bundles are mainly found in the leaves.
 (A) (A) is true, but (B), (C) and (D) are wrong.
 (B) (B) is true, but (A), (C) and (D) are wrong.
 (C) (C) is true, but (A), (B) and (D) are wrong.
 (D) (A) and (B) are true, but (C) and (D) are wrong.

- 25.** Tendons connect
 (A) bone to bone
 (B) bone to muscle
 (C) muscle to blood vessel
 (D) nerve to bone.

- 26.** Match the items in column-I with those in column-II and choose the correct option.

Column I	Column II
1. Neuron	A. Ossein
2. Bone matrix	B. Nissl's bodies
3. RBC of man	C. Antibodies
4. Lymphocytes	D. Non-nucleated.

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

- 27.** Match List-I to List-II.

	List I		List II
(A)	Metacentric	(i)	Centromere Chromosome situated close to the end forming one extremely short and one very long arms

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(B)	Acrocentric	(ii)	Centromere at the terminal end
(C)	Sub-metacentric	(iii)	Centromere in the middle forming two equal arms of chromosomes
(D)	Telocentric	(iv)	Centromere slightly away from the middle forming one shorter arm and one longer arm

Choose the correct answer from the options given below:

- (A) (a)-(i), (b)-(iii), (c)-(ii), (d)-(iv)
 (B) (a)-(ii), (b)-(iii), (c)-(vi), (d)-(i)
 (C) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv)
 (D) (a)-(iii), (b)-(i), (c)-(iv), (d)-(ii)

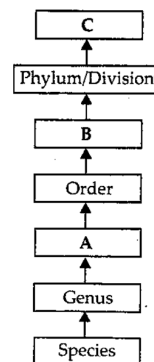
- 28.** Read the following statements on lipids and find out correct set of statements:
- (A) Lecithin found in the plasma membrane is a glycolipid.
 (B) Saturated fatty acids possess one or more c=c bonds
 (C) Gingely oil has lower melting point, hence remains as oil in winter
 (D) Lipids are generally insoluble in water but soluble in some organic solvents
 (E) When fatty acid is esterified with glycerol, monoglycerides are formed

Choose the correct answer from the options given below:

- (A) (a), (d) and (e) only
 (B) (c), (d) and (e) only
 (C) (a), (b) and (d) only

(D) (a), (d) and (c) only

- 29.** The given flowchart represents the hierarchy of various taxonomic categories.



Identify the missing categories (A,B and C) And select the correct statements regarding these.

- (i) A is the taxonomic category which contains a number of related genera.
 (ii) Examples of category B are Monocotyledoneae, Dicotyledoneae, Mammalia, etc.
 (iii) C represents the basic unit of taxonomic hierarchy.
 (iv) Examples of category C are Fungi, Monera, Proteista , etc.

- (A) (i) and(ii)
 (B) (iii) and (iv)
 (C) (i), (ii) and (iv)
 (D) (i), (ii) and (iv)

- 30.** Jacobson's organ is concerned with
 (A) smell (B) burrowing
 (C) touch (D) sight

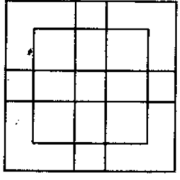
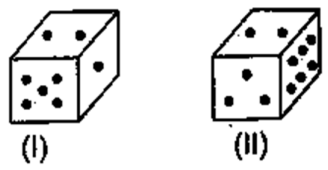
ANSWER-KEY

**21.(A) 22.(D) 23.(C) 24.(D) 25.(B)
 26.(D) 27.(D) 28.(B) 29.(C) 30.(A)**

MENTAL ABILITY

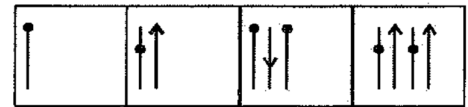
- 31.** P and Q are brothers , X and Y are sisters, son of P is the brother of Y. How is Q related to X?

**CAREER ACADEMY TALENT SEARCH EXAM
CLASS-11TH (MEDICAL & NON-MEDICAL)(SET-B)**

- (A) Father (B) Brother
(C) Daughter (D) Uncle
32. How many months are there in 7 yr 2 months?
(A) 72 (B) 86
(C) 80 (D) 94
33. At what time between 5:30 and 6 O'clock, will the hands of a clock be at right angle?
(A) $43\frac{3}{11}$ min past 5
(B) $46\frac{4}{11}$ min past 5
(C) 40 min past 5
(D) 45 min past 5
34. How many squares does the following figure contain?

(A) 19 (B) 20
(C) 25 (D) 27
35. If \times stands for $+$, $<$ stands for $-$, $>$ stands for \times , $+$ stands for \div , $-$ stands for $=$, \div stands for $>$, and $=$ stands for $<$, then which of the given equations is correct?
(A) $8 < 4 \times 3 - 3 \times 2 \times 1$
(B) $8 > 4 < 3 - 3 > 2 < 1$
(C) $8 + 4 < 3 \div 3 < 2 < 1$
(D) $8 + 4 \times 3 = 3 > 2 \times 1$
36. If number 1 is marked on the bottom, which number will be on the top?

(A) 1 (B) 2

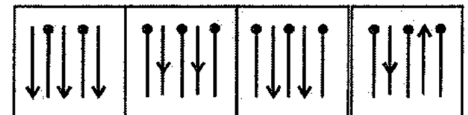
- (C) 3 (D) 6
37. A man is facing North-East. He turns 90° in the clockwise direction and then 135° in anti-clockwise direction. Which direction is he facing now?
(A) East (B) West
(C) North (D) South
38. Direction: Study the problem figures and try to establish the relationship between them. From the answer figures, pick out the figure which most appropriately completes the series.

Problem Figures :



(A) (B) (C) (D)

Answer Figures :



(1) (2) (3) (4)

39. Mita is taller than Rita but not as tall as Soni. Rita is taller than Sarita. Soni is not as tall as Rupa. Who among them is the tallest?
(A) Mita (B) Rupa
(C) Soni (D) Sarita
40. Amar travels one km due East, then 5 km due South, then 2km due East and finally 9 km due North. How far is from the starting point?
(A) 16km (B) 8 km
(C) 6 km (D) 5 km
- ANSWER-KEY**
31.(D) 32.(B) 33.(B) 34.(B) 35.(D)
36.(D) 37.(C) 38.(B) 39.(B) 40.(C)