

NEW STANDARD ACADEMY

Marks: 60

Date : 21-05-24

CLASS : 11TH (NEET)

Time: 90 min.

PHYSICS -

1. A car moves for half of its time at 80 km/h and for rest half of time at 40 km/h. Total distance covered is 60 km. what is the average speed of the car

- a) 60km/hr b) 80 km/hr
c) 120 km/hr d) 180 km/hr

2. A particle moves with a constant speed but in constantly varying direction. The path of the particle will be

- a) Elliptical b) Linear
c) Circular d) Parabolic

3. Relation between initial velocity, final velocity and acceleration is

- a) $v = u + 2aS$
b) $v = u + aS$
c) $v^2 - u^2 = 2aS$
d) $v^2 - u^2 = -2aS$

4. The equation of motion for the freely dropped body under gravity is

- a) $v^2 = -2aS$
b) $v^2 = 2gS$
c) $v^2 = -2gS$
d) $v^2 = 2aS$

5. A body can't have

- a) A constant speed and varying velocity
b) An acceleration and a constant speed
c) a constant velocity and varying speed
d) non zero speed and zero acceleration.

6. The acceleration of a moving body can be found from

- a) Area under velocity- time graph
b) Area under distance- time graph
c) Slope of the velocity- time graph
d) Slope of the distance - time graph

7. A motor car moving with a uniform speed of 20m/sec comes to stop on the application of brakes after travelling a distance of 10m. Its acceleration is

- a) 20 m/sec b) 14 m/sec
c) 16 m/sec d) 18 m/sec

8. The initial velocity of a body moving along a straight line is 7 m/s. It has a uniform acceleration of 4m/sec^2 . The distance covered by the body in 5th second of its motion is

- a) 25m b) 35m
c) 50m d) 85m

9. Which of the following four statements is false

- a) A body can have zero velocity and still be accelerated
b) A body can have constant velocity and still have a varying speed
c) A body can have constant speed and still have a varying speed
d) The direction of the velocity of a body can change when its acceleration is constant

10. The numerical ratio of average speed to average velocity is

- a) Always equal to one
b) Always less than one
c) Always more than one
d) Equal to or more than one

CHEMISTRY

11. The ionic sizes decrease in the order

- a) $K^+ > S^{2-} < Sc^{3+} < V^{5+} < Mn^{7+}$
b) $S^{2-} < K^+ > Sc^{3+} > V^{5+} > Mn^{7+}$
c) $Mn^{7+} > V^{5+} < Sc^{3+} > K^+ > S^{2-}$
d) $Mn^{7+} < V^{5+} < Sc^{3+} < S^{2-} > K^+$

12. The size of Mo is very similar to W due to

- a) The difference of atomic number by one
b) The contraction in size in the first transition series elements
c) Lanthanide contraction
d) Actinide contraction

13. For which of the elements of different groups the change in non polar covalent radii is maximum?

- a) Groups 1 and 2
b) Groups 13 and 14

- c) Group 14 and 15
d) Groups 16 and 17
14. Which of the following orders regarding metallic atomic radii is correct?
a) ${}_{45}\text{Rh} > {}_{46}\text{Pd} < {}_{47}\text{Ag}$
b) $\text{Rh} < \text{Ag} < \text{Pd}$
c) $\text{Pd} < \text{Rh} < \text{Ag}$
d) $\text{Pd} < \text{Ag} < \text{Rh}$
15. The set representing the correct order of ionic radius is
a) $\text{Li}^+ > \text{Be}^{2+} > \text{Na}^+ > \text{Mg}^{2+}$
b) $\text{Na}^+ > \text{Li}^+ > \text{Mg}^{2+} > \text{Be}^{2+}$
c) $\text{Li}^+ > \text{Na}^+ > \text{Mg}^{2+} > \text{Be}^{2+}$
d) $\text{Mg}^{2+} > \text{Be}^{2+} > \text{Li}^+ > \text{Na}^+$
16. The electronic configuration of gadolinium (Atomic number 64) is
a) $[\text{Xe}] 4f^3 5d^5 6s^2$
b) $[\text{Xe}] 4f^7 5d^5 6s^1$
c) $[\text{Xe}] 4f^7 5d^1 6s^2$
d) $[\text{Xe}] 4f^8 5d^6 6s^2$
17. The order of screening effect of electrons of s, p, d and f orbitals of a given shell of an atom on its outer shell electrons is
(a) $s > p > d > f$ (b) $f > d > p > s$
(c) $p < d < s < f$ (d) $f > p > s > d$
18. Which of the following is not an actinoid?
(a) Curium (Z=96)
(b) Californium (Z=98)
(c) Uranium (Z=92)
(d) Terbium (Z=65)
19. Among halogens, the correct order of amount of energy released in electron gain (electron gain enthalpy) is
(a) $\text{F} > \text{Cl} > \text{Br} > \text{I}$
(b) $\text{F} < \text{Cl} < \text{Br} < \text{I}$
(c) $\text{F} < \text{Cl} > \text{Br} > \text{I}$
(d) $\text{F} < \text{Cl} < \text{Br} > \text{I}$
20. Which of the following is the correct order of size of the given species?
a) $\text{I} > \text{I}^+ > \text{I}^-$ b) $\text{I}^+ > \text{I}^- > \text{I}$
e) $\text{I}^- > \text{I}^+ > \text{I}$ d) $\text{I}^- > \text{I} > \text{I}^+$

BIOLOGY

21. Match the following with correct combination:

Column I	Column II
A) Triglycerides	1) Galactose
B) Lactose	2) Glycerol
C) RNA	3) Palmitic acid
D) β sheet	4) Uracil
E) Bee wax	5) Secondary

Structure

- a) A=5, B=1, C=4, D=2, E=3
b) A=3, B=1, C=4, D=5, E=2
c) A=2, B=1, C=4, D=5, E=3
d) A=3, B=1, C=4, D=2, E=5

The question given below consists of Assertion and Reason. Use the following key to select the correct answer:

- a) If both assertion and reason are correct and reason is correct explanation for assertion.
b) If both assertion and reason are correct but reason is not correct explanation for assertion.
c) IF assertion is correct but reason is incorrect.
d) Both assertion and reason is incorrect.

22. Assertion (a) Arachidonic acid is an unsaturated fatty Acid.

Reason: There are present one or more double bonds between carbon atoms in unsaturated fatty acids

23. Glycogen is a homopolymer made of

- a) Glucose units
b) Galactose units
c) Ribose units
d) Amino acids

24. In secondary structure of protein molecules the peptide chain attains a helical structure through the formation of

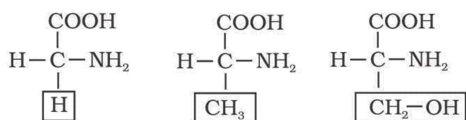
- a) Peptide bonds
b) Intermolecular ionic bond
c) Hydrogen bond
d) Disulphide bond

25. Match the following and choose the correct one

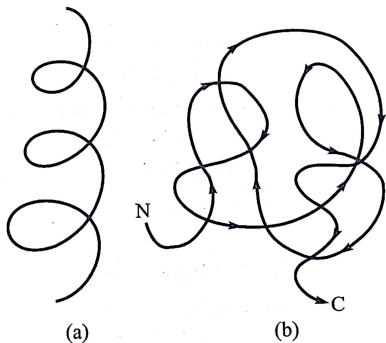
Column I	Column II
A) Collagen	i) Hormone
B) GLUT ₄	ii) Fights infectious Agents
C) Insulin	iii) intercellular ground substance
D) Antibody	iv) Enables glucose transport into cells

- a) A(i),B(ii),C(iii),D(iv)
 b) A(iii),B(i),C(iii),D(iv)
 c) A(iii),B(iv),C(i),D(ii)
 d) A(ii),B(i),C(iii),D(iv)
26. Which of the following is a heteropolymer?

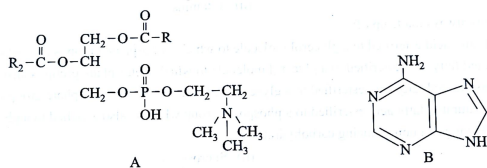
- a) Cellulose b) Glycogen
 c) Starch d) Protein
27. Recognise the figure and find out the correct matching.



- a) A-serine, B-glycine-C-alanine
 b) A- glycine,B- serine, C-alanine
 c) A- glycine,B- alanine, C- serine,
 d) A- alanine B- serine,C- glycine,
28. Recognise the figure and find out the correct matching.



- a) A -Primary structure B- Secondary structure
 b) A- Secondary structure-B -Primary structure
 c) A- Secondary structure-B-Tertiary structure
 d) A- Tertiary structure,B-Quaternary structure
29. Which one of the following structural formulae of two organic compounds is correctly identified along with its related function?



- a) A: Lecithin- a component of cell

- membrane
- b) B: adenine-a nucleotide that makes up nucleic acids
 c) A: Triglyceride- major source of energy
 d) B: Uracil-A component of DNA
30. Which one is the most abundant protein in the animal world?
- a) Collagen b) Insulin
 c) Trypsin d) Haemoglobin