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## SET - 3

## I.CHOOSE THE CORRECT ANSWER

$30 \times 1=30$

1. Energy generation in stars due to $\qquad$
a) Chemical reaction
b) Fission
c) Fusion of light nuclei
d) Fusion of heavy nuclei
2. Atoms of different elements with different atomic numbers, but same mass number are known as $\qquad$
a) Isobars
b) Isotopes
c) Isotones
d) Isomers
3. The group of rays is $\qquad$
a) Lines
b) Dots
c) Beam
d) None of these
4. In the nuclear reaction ${ }_{6} \mathrm{X}^{12} \dot{\alpha}$ decay ${ }_{Z} \mathrm{Y}^{\mathrm{A}}$, the value of A and Z is $\qquad$
a) 8,6
b) 8,4
c) 4,8
d) 6,12
5. The number of periods and groups in the periodic table are $\qquad$
a) 6,16
b) 7,17
c) 8,18
d) 7,18

6 . Which of the following is correct?
a) Vibrate along the direction of the wave motion
b) Vibrate but not in any fixed direction
c) Vibrate perpendicular to the direction of the wave motion
d) Do not vibrate
6. The basis of modern periodic law is $\qquad$
a) Atomic number
b) Atomic mass
c) Isotopic mass
d) No. of neutron
7. The volume occupied by 1 mole of a diatomic gas at STP is $\qquad$
a) 11.2 lit
b) 5.6 blit
c) 22.4 lit
d) 44.8 lit
8. Which of the following pairs can be the successive members of a homologous series?
a) $\mathrm{C}_{3} \mathrm{H}_{8} \& \mathrm{C}_{4} \mathrm{H}_{10}$
b) $\mathrm{C}_{2} \mathrm{H}_{2} \& \mathrm{C}_{2} \mathrm{H}_{4}$
c) $\mathrm{CH}_{4} \& \mathrm{C}_{3} \mathrm{H}_{6}$
d) $\mathrm{C}_{2} \mathrm{H}_{5} \mathrm{OH} \&$
$\mathrm{C}_{4} \mathrm{H}_{8} \mathrm{OH}$
9. The sound waves are reflected from an obstacle into the same medium from which they were incident. Which of the following changes?
a) Speed
b) Frequency
c) Wavelength d) None of these
10. In a simple circuit, why does the bulb glow when you close the switch?
(a) The switch produces electricity
(b) Closing the switch completes the circuit
(c) Closing the switch breaks the circuit
(d) The bulb is getting charged.
11. Kilowatt hour is the unit of $\qquad$
(a) resistivity
(b) conductivity
(c) electrical energy
(d)
electrical power
12. Which of the following are used as anaesthetics?
a) Carboxylic acids
b) Ethers
c) Esters
d)

Aldehydes
13. The gram molecular mass of oxygen molecule is
a) 16 g
b) 18 g
c) 32 g
d) 17 g
14. Chemical formula of rust is $\qquad$ -.
a) $\mathrm{FeO} \cdot \mathrm{xH}_{2} \mathrm{O}$
b) $\mathrm{FeO}_{4} \cdot \mathrm{xH}_{2} \mathrm{O}$
c) $\mathrm{Fe}_{2} \mathrm{O}_{3} \cdot \mathrm{xH}_{2} \mathrm{O}$
d) Fe O
15. The number of periods and groups in the periodic table are $\qquad$
a) 6,16
b) 7,17
c) 8,18
d) 7,18
16. The xylem and phloem arranged side by side on same radius is called $\qquad$
a)radial
b) amphivasal
c)conjoint
d) None of these
17. Mammals are $\qquad$ animals.
a) Cold blooded
b) Warm blooded
c) Poikilothermic
d) All the above
18. The body of leech has
a) 23 segments
b) 33 segments
c) 38 segments
d) 30 segments
19. The wall of human heart is made of
a) Endocardium
b) Epicardium
c) Myocardium d) All of the above
20. Dendrites transmit impulse cell body and axon transmit impulse cell body.
(a) away from, away from
(b) towards, away from
(c) towards,towards
(d) away from, towards
21.Identify the exocrine gland
a) Pituitary gland
b) Adrenal gland
c) Salivary gland
d) Thyroid gland
22. What is true of gametes?
a) They are diploid
b) They give rise to gonads
c) They produce hormones
d) They are formed from gonads
23. Okasaki fragments are joined together by $\qquad$ —.
a) Helicase
b) DNA polymerase
c) RNA primer
d) DNA ligase
24.Paleontologists deal with
a. Embryological evidences
b. Fossil evidences
c. Vestigial organ evidences
d. All the above
25.The miracle rice which saved millions of lives and celebrated its 50th birthday is
a. IR 8
b. IR 24
c. Atomita 2
d. Ponni
26. Which of the following is used to produce products useful to humans by biotechnology techniques?
a. enzyme from organism b. live organism
c. vitamins
d. both (a) and (b)
27.Excessive consumption of alcohol leads to
a) Loss of memory
b) Cirrhosis of liver
c) State of hallucination
d)
Supression of brain
28. Coronary heart disease is due to
a) Streptococci bacteria
b) Inflammation of pericardium
c) Weakening of heart valves
d) Insufficient blood supply to heart muscles
29.A renewable source of energy is
a) petroleum
b) coal
c) nuclear fuel
d) trees
30. Soil erosion is more where there is
a) no rain fall
b) low rainfall
c) rain fall is high
d) none of these

## II. ANSWER THE FOLLOWING (ANY 10)

$10 \times 2=20$
31. What is co-efficient of cubical expansion?
32. State Boyle's law
33. State-the law of volume
34. What is the average energy released from a single fission process?
35. Give the SI unit of radioactivity.
36. Define critical mass.
37. What is stellar energy?
38. Define one Roentgen.
39.Why did Mendel select pea plant for his experiments?
40.What do you understand by the term phenotype and genotype?
41.What are allosomes?
42.What are the Okazaki fragments?
43. copy the diagram and label the parts .

