

PART -1**NOTE : (1) Answer all questions.****(2) choose the most suitable answer.**

12X1=12

- 1) In which of the following sport the turning of effect of force used
a) swimming b) tennis c) cycling d) hockey
- 2) Where should an object be placed so that a real and inverted image of same size is obtained by an convex lens
a)f b)2f c)infinity d)between f and 2f
- 3) If sound wave travlles with frequency of 1.25×10^4 Hz at 344 ms^{-1} the wave length will be
a) 27.52m b) 275.2m c)0.02752m d) 2.752 m
- 4) In the nuclear reaction ${}_8X^{12} \xrightarrow{\beta\text{decay}} {}_Z Y^A$ the value of A&Z
a)8,12 b)6,8
c)9,12 d)cannot be determined with given data
- 5) Neon shows zero electron affinity due to
a) stable arrangement of neutrons b) stable configuration of electrons
c) reduced size d) increaseci density
- 6) A 25% Alcohol solution means
a) 25 ml alcohol in 100ml of water b) 25 ml alcohol in 25 ml of water
c) 25 ml alcohol in 150 ml of water d) 75 ml alcohol in 25 ml of water
- 7) Rectified spirit is an aqueous solution which contains about of ethanol
a) 95.5 % b) 75.5 % c)55.5 % d) 45.5%
- 8) Kreb's cycle take place in
a)chloroplast
c) stomata
- 9) "Heart of heart " is called
a) SA node b) AV node c) purkinje fibres d) bundle of HIS
- 10) Node of ranvier is found in
a) muscle b)axons c) dendrites d) cycton
- 11) Polyphagia is a condition seen in
a) obesity b) diabities mellitus c) diabities insipidus d) AIDS
- 12) R DNA is a
a) vector DNA
C) Recombinant of vector DNA and desired DNA b) circular DNA
d) satellite DNA

PART - 2**Answer any 7 questios (q.no :22 is compulsory)**

7X2=14

- 13) State Rayleigh's law of scattering ?

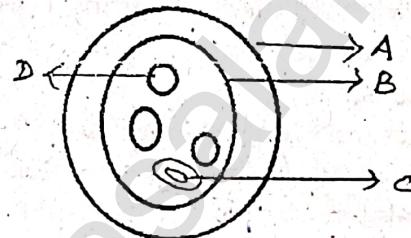
- 14) **Match the following.**

- | | | |
|------------------------|---|--------------------|
| 1. infrasonic | - | a) compression |
| 2 .Echo | - | b) 22 KHz |
| 3. Ultrasonic | - | c) 10 Hz |
| 4. Highpressure region | - | d) ultrasonography |

- 15) Define atomicity?
 16) Name the simplest ketone and give its structural formula ?
 17) Write the reaction for photosynthesis ?
 18) Write the dental formula of rabbit?
 19) Why is the colour of the blood red?
 20) What are the chemical messengers?
 21) What is scratch?
 22) Calculate the resistance of a conductor through which a current of 2A passes, when the potential difference between its ends is 30V?

PART -3**Note: Answer any 7 questions (q.no 32 is compulsory)** $7 \times 4 = 28$

- 23) State any prove the law of conservation of linear momentum?
 24) a) mention two cases in which there is no Doppler effect in sound?
 b) explain why the ceiling of concert halls are curved ?
 25) In what way hygroscopic substances differ from deliquescent substances ?
 26) Differentiate soaps and detergents ?
 27) Define ethnobotany and write its importance.
 28) a)What are allosomes?
 b) What are okazaki fragments?
 29) a) Define triple fusion ?
 b) Identify the parts A,B ,C and D



- 30) Enumerate the importance of forest ?
 31) a) Name the parts of the hind brain?
 b) **Match the following.**
- | | | |
|---------------------|---|------------------------------|
| 1. nissl's granules | - | a) fore brain |
| 2.hypothalamous | - | b) peripherel nervous system |
| 3. cerebellum | - | c) cyton |
| 4. Schwann cell | - | d)hind brain |
- 32) Calculate the pH of 0.01 M HNO_3 ?

PART - 4**Answer all the questions carries seven marks.****(draw diagram wherever necessary)** $3 \times 7 = 21$

- 33) Explain the construction and working of a compound microscope?

(OR)

- a) Compare the properties of alpha , beteh, and gamma radiations ?
 b) Define one Roentgen?
 34) a) Give the salient features of modern atomic theory ?
 b) Give any two examples for heterodiatomic molecules ?

(OR)

- a) Differentiate reversible and irreversible reactions ?

- b) How does pH play important role in everyday life ?

- 35) a) With a neat labelled diagram explain the techniques in gene cloning (or) measure by RTVM 10 அம்மியல் Page - 2
 b) overcome the problems of an alcholic