Date :-15/01/2022 **Time :-30 Minutes** **Exam Name :-NEET-1to1Guru-2** **Mark :- 80**

1. Length is measured in metre and time in second as usual. But a new unit of mass is so chosen that $G = 1$. This new unit of mass is equal to

(a) 1.5×10^7 kg **(b)** 1.5×10^{10} kg

(c) 6.67×10^{-11} kg **(d)** 6.67×10^{-8} kg

2. The kinetic energy of a body is increased by 300%. What is the percentage increase in the momentum of the body?

(a) 50% **(b)** 100% **(c)** 150% **(d)** 200%

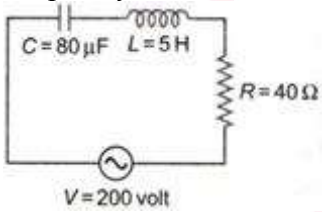
3. If the radius of the circular track decreases, then the angle of banking

(a) increases. **(b)** decreases.

(c) first increases then decreases.

(d) does not change.

4. From figure shown below a series L C R circuit connected to a variable frequency 200 V source. $C = 80\,\mu F$ and $R = 40\,\Omega$. Then the source frequency which drive the circuit at resonance is



(a) 25 Hz **(b)** $\frac{25}{\pi}$ Hz **(c)** 50 Hz **(d)** $\frac{50}{\pi}$ Hz

5. A cylinder rolls down an inclined plane of inclination $30°$, the acceleration of cylinder is

(a) $\frac{g}{3}$ **(b)** g **(c)** $\frac{g}{2}$ **(d)** $\frac{2g}{3}$

6. The pK_a of a weak acid (HA) is 4.5. The pOH of an aqueous buffered solution of HA in which 50% of the acid ionised is

(a) 4.5 **(b)** 2.5 **(c)** 9.5 **(d)** 7.0

7. The weakest acid is:

(a) H_2Se **(b)** H_2Te **(c)** H_2O **(d)** H_2S

8. Which one of the following has an optical isomer? (en=ethylenediamine)

(a) $[Zn(en)(NH_3)_2]^{2+}$ **(b)** $[Co(en)_3]^{3+}$

(c) $[CO(H_2O)_4(en)]^{3+}$ **(d)** $[Zn(en)_2]^{2+}$

9. When ethanal reacts with CH_3MgBr and C_2H_5OH /dry HCl, the product formed are

(a) Ethyl alcohol and 2-propanol

(b) Ethane and hemiacetal

(c) 2-propanol and acetal

(d) Propane and methyl acetate

10. If the nitrogen atom had electronic configuration $1s^7$, it would have energy lower than that of the normal ground state configuration $1s^2 2s^2 2p^3$, because the electrons would be closer to the nucleus. Yet $1s^7$ is not observed because is violates :

(a) Heisenberg s uncertainty principle

(b) Hund's rule **(c)** Pauli's exclusion principle

(d) Bohr's postulate of stationary orbits

11. The term heterosis was first coined by

(a) McClintock **(b)** Boweri **(c)** Swaminathan

(d) None of these

12. Which of the following statements (events) is/are true for mitotic telophase?

(a) Nucleolus, GB and ER form

(b) NM assembles around each chromosomes clusters

(c) Arrival of chromosomes cluster at opposite poles and loss of their identity as discrete elements

(d) All of the above

13. Undifferentiated totipotent cells of sponges, are

(a) Archaeocytes **(b)** Porocytes **(c)** Trophocytes

(d) Myocytes

14. If the parent body is haploid then the gametes are

(a) Haploid **(b)** Diploid **(c)** Triploid

(d) None of these

15. Permanent localised qualitative change in size, biochemistry, structure and function of cells or organs is called

(a) Cell division **(b)** Meristematic division

(c) Differentiation **(d)** Dedifferentiation

16. Embryogenesis is the process of development of

(a) Embryo **(b)** Endosperm **(c)** Individual

(d) Internal organs

17. During the process of isolation of DNA, chilled ethanol is added to (Karnataka NEET 2013)

(a) precipitate DNA

(b) break open the cell to release DNA

(c) facilitate action of restriction enzymes

(d) remove proteins such as histones

18. Subunits of 80 S ribosome are

(a) 40 S **(b)** 60 S **(c)** Both (a) and (b)

(d) None of these

19. A true breeding plant producing red flowers is crossed with a pure plant producing white flowers. Allele for red colour of flower is dominant. After selfing the plants of first filial generation, the proportion of plants producing white flowers in the progeny would be

(a) $\frac{3}{4}$ **(b)** $\frac{1}{4}$ **(c)** $\frac{1}{3}$ **(d)** $\frac{1}{2}$

20. Photosystem II occurs in (1992)

(a) stroma **(b)** cytochrome **(c)** grana

(d) mitochondrial surface