Register Number							

SSLC FIRST REVISION EXAMINATION 2019-20

SCIENCE

Time Allowed : 3.00 Hours] [Max. Marks : 75

Part – I

Note : 1. Answer all the questions. **12x1=12**

2. Choose the most suitable answer and write the code with corresponding answer.

1. The SI unit of torque is
   a) Nm b) Newton c) dyne d) Kgf
2. If the energy of the incident beam and the scattered beam are same, then the scattering is called as _____ scattering.
   a) Inelastic b) elastic c) raman d) rayleigh
3. Which of the following is correct?
   a) Rate of change of charge is electrical power. b) Rate of change of charge is current.
   c) Rate of change of energy is current. d) Rate of change of current is charge.
4. In the nuclear reaction ${}_6X^{12} \xrightarrow{\beta \text{ decay}} {}_zY^{A}$, the value of A & Z.
   a. 12 , 4 b. 4, 12
   c. 12,7 d. cannot be determined with the given data
5. One mole of any gas occupies _____ ml at S.T.P
   a) 25400 b) 21400 c) 22400 d) 22.4
6. Which of the following have inert gases 8 electrons in the outermost shell.
   a) Ne b) Ar c) Kr d) all the above
7. The number of components in a ternary solution is _____
   a. 2 b. 3 c. 4 d. 5
8. Photolysis is a decomposition reaction caused by _____
   a. heat b. Electricity c. light d. mechanical energy
9. Pharyngeal ganglion in leech is a part of
   a) Excretory system b) Nervous system c) Reproductive system d) Respiratory system
10. Which is the sequence of correct blood flow
    a) ventricle - atrium - vein – arteries b) atrium - ventricle - veins - arteries
    c) atrium - ventricle - arteries – vein d) ventricles - vein - atrium – arteries
11. LH is secreted by
    a) Adrenal gland b) Thyroid gland c) Anterior pituitary d) Hypothalamus.
12. 2n – 2 is known as.
    a) Monosomy b) trisomy c) nullisomy d) none of the above

PART – II

Answer any seven questions: (Q.No 22 is compulsory) **7x2=14**

13. Correct the statement : (True or False)
    a) Weight of a body is greater at the equator and less at the polar region
    b) Velocity of light is greater in denser medium than in rarer medium
14. Define one Roentgen.
15. What is the coefficient of real expansion?
16. **Assertion and reasoning type**
    Mark the correct choice as
    i) A and R are correct, R explains the A. ii) A is correct, R is wrong.
    iii) A is wrong, R is correct. iv) A and R are correct, R doesn't explains A.
    a) **Assertion** : Atomic mass of aluminium is 27
       Reason : An atom of aluminium is 27 times heavier than 1/12th of the mass of the C – 12 atom
    b) **Assertion** : The nature of bond in HF molecule is ionic
       Reason : The electronegativity difference between H and F is 1.9
17. Differenciate soaps and detergents.
18. Write the uses of ethanoic acid.
19. **Match the following:**

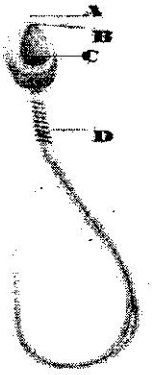
Column – A	Column - B
Amphivasal	Pleura
Lungs	Pressure gradient
AB blood group	Dracaena
Osmosis	Absence of antibody

20. Define stimulus.
21. a) Which harmone is secreted during emergency situation of man?
    b) Which harmone induces parthenocarpy in tomatoes?
22. 3.5 litres of ethanol is present in 15 litres of aqueous solution of ethanol. Calculate volume percentage of ethanol solution.

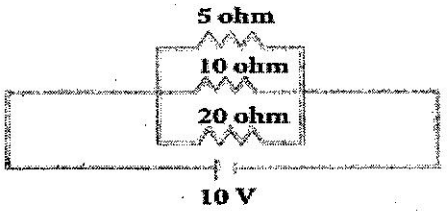
PART – III

Answer any seven questions: (Q.No 32 is compulsory) **7x4=28**

23. i) State the Principle of moments.
    ii) State Rayleigh's law of scattering.
24. i) Distuinguish ideal gas and real gas.
    ii) What happens to the resistivity, as the conductor is made thicker?
25. i) Why does sound travel faster on a rainy day than on a dry day?
    ii) Give the function of control rods in a nuclear reactor
26. Give the salient features of " modern atomic theory"
27. i) What is rust? Give the equation for formation of rust.
    ii) What is aqueous and non-aqueous solution? Give an example
28. i) Differentiate reversible and irreversible reactions.
    ii) How is ethanoic acid prepared from ethanol? Give the chemical equation.
29. i) Why should the light dependent reaction occur before the light independent reaction?
    ii) Differentiate : Aerobic and Anaerobic respiration
30. i) Mature RBC in mammals do not have cell organelles – give the reason
    ii) What are chemical messengers?
31. i) Identify the diagram and label the given parts:



    (Head , mitochondria , nucleus ,acrosome)
    ii) What are Allosomes?
32. In the circuit diagram given below, three resistors R_1, R_2 and R_3 of 5Ω, 10Ω and 20Ω respectively are connected as shown.Calculate
    A) Current through each resistor
    B) Total current in the circuit
    C) Total resistance in the circuit



PART- IV

Answer all the questions **3X7=21**

33. (a) i) Explain the construction and working of a Compound Microscope.
        ii) State newton second law of motion **(OR)**
    (b) i) What is a nuclear reactor? Explain its essential parts with their functions.
        ii) State the three uses of ultrasonic vibrations
34. (a) i) Derive the relationship between Relative molecular mass and Vapour density.
        ii) Define Electron affinity? **(OR)**
    (b) i) Define Volume percentage
        ii) Explain how ethanol is prepared from sugarcane
35. (a) i) List out the parasitic adaptations in leech.
        ii) Why is the Sinoatrial node called the pacemaker of heart?
        iii) Define genetic engineering **(OR)**
    (b) i) Write a short note on Mesophyll.
        ii) How does Binary fission differ from Multiple fission?
        iii) What will you do to prevent leaf fall and fruit drop in plants?