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Register Number | | | | | | | |

SSLC Quarterly Examination 2017-18

SCIENCE

Time Allowed : 2½ Hours] [Max. Marks : 75

INSTRUCTION : 1. Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
2. Use blue or black ink to write and pencil to draw diagrams.

Section – I

Note : 1. Answer all the fifteen questions. 15 x 1 = 15
2. Choose the correct answer from the alternatives given in the brackets

1. Somatic gene therapy causes
(Changes in sperm, Changes in progeny, changes in body cell, changes in ovum)
2. An example of protozoan infecting our intestine is ----------
(Plasmodium vivax, Entamoeba histlytica, Trypanosoma gambinense, Taenia solium).
3. The hormone administered by doctors to a pregnant women to help in child birth during the time of natural delivery is ----------.
(Estrogen, progesterone, Insulin, Relaxin)
4. ----------is the wind dispersal of fruits and seeds
(Auto chory , Anemochory, Hydrochory, Zoochory)
5. _____ is a green house gas which causes climate change and global Warming.
(Hydrogen , Oxygen, Nitrogen, Carbon- di -oxide).
6. Dispersed phase + Dispersion Medium →
(True solution, Colloidal solution, Suspension, Solution)
7. ---------- In which solution the diffusion of particles does not occur?
(True solution, colloidal solution, Suspension, Water)
8. $Zn + 2HCl \rightarrow ZnCl_2 + H_2\uparrow$
The above reaction is an example of _____
(Combination reaction , Double displacement reaction , Displacement reaction, Decomposition reaction)
9. The king of chemical is _____
(Nitric acid, Sulphuric acid, Hydrochloric acid, Lactic acid)
10. One light year is equal to _____
(365.25 x24x60x60x3x10^{8}m , 1x24x60x60x3x10^{8}m , 360x24x60x60x3x10^{8}m)
11. Chandrayaan –I operated for _____ days.
(520, 312 , 460, 412)
12. Weight is measured using _____
(physical balance, Spring balance)
13. The potential difference required to pass a current 0.2A in a wire of resistance 40ohm is _____
(100V, 8v, 0.08V, 80V)

14. Kilo Watt- hour is the unit of _____

(Potential difference, electric power, electric energy, Charge)

15. _____ surface absorbs more heat that any other surface under identical conditions.

(White, Rough, black, Yellow)

SECTION II - (Marks : 40)

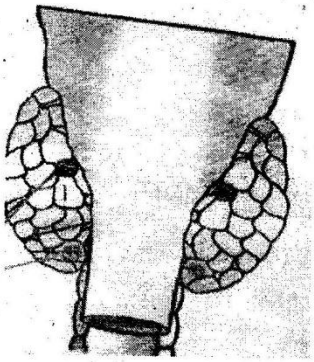
Note : Answer any twenty questions. **20×2 = 40**

16. Sequentially arrange the different species of man from primitive to modern Man.

Neanderthal man, Homo hablilis,Homo erectus , Homo sapiens

17. What do you mean by phenotype and genotype if an individual? Explain.
18. What are Monoclonal antibodies ? Mention its use.
19. What are variations ? Mention their types.
20. What is triple antigen? Name the three diseases which can be prevented by using it.
21. Name two diseases that are transmitted by house flies, mention their causative pathogens.
22. Differentiate between the diseases night blindnessand colour blindness.
23. From the below diagram label the following parts

(Vocal cord, thyroid, para thyroid , Trachea).



24. Match the following with respect to dispersal of fruits/ seeds.

a) Autochory - Lotus

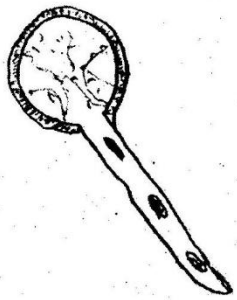
b) Anemochory - Xanthium

c) Hydrochory - Tridax

d) Zoochory - balsam

25. Differentiate dehiscent fruits and indehiscent fruits with suitable examples
26. Draw the given diagram and label the following parts

(Exine,Tube nucleus)



27. Classify the following into producers, consumers decomposers.

i) butterfly ii) grasshopper iii) Calottes iv) Snakes

v) Shoe flower vi) Nitrobacteria

28. Living Organisms adapt themselves according to their habitat.

Match the following

Fish - wings

Camel - hard skin

Frog - fins

Birds - hind limbs with web

29. What is Henry's law?

30. What is Brownian movements?

31. What is tyndall effect?

32. From the given examples identify the isotopes and isobars.

$_{18}Ar^{40}$, $_{17}Cl^{35}$, $_{20}Ca^{40}$, $_{17}Cl^{37}$

33. 'Cl' represents chlorine atom 'Cl_2' represents chlorine molecule. List out any two differences between atoms and molecules.

34. Identify the wrong statements and correct them.

a) The pH of acid is higher than 7

b) Acetic acid is used in aerated drinks.

35. The hydroxide ion concentration of a solutionis $1.0x10^{-10}$M. What is the pH of the solution?

36. Observe the given chemical change and answer the following.

Identify A and B

a) Write the commercial name of Calcium hydroxide

b) Identify products c and D when HCl is allowed toreact with calcium oxide.

c) Write whether Calcium oxide is acidic or basic.

37. What are the differences between Mass and weight.

38. Match the following.

1. Force (F) - Fxd
2. Momentum - $\frac{GM}{R^2}$
3. Moment (T) - mxa
4. Gravity - mxv

39. Why does a spanner have a long handle?

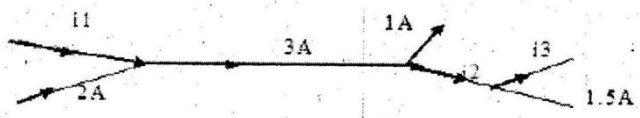
40. Why does a boxer always move along the direction of the punch of the opponent?

41. Write two principles that are used in rocket propulsion.

42. What is nuclear fission and nuclear fusion?

43. Fuse wire is made up of an alloy of _____ which has high resistance and _____

44. The figure is a part of a closed circuit find the currents i1, i2 and i3



45. What are the limitations in harnessing wind energy?

SECTION III - (Marks : 20)

Note : (i) Answer any four questions by choosing one question from each part. 4x5 = 20

(ii) Draw diagrams wherever necessary.

PART – I

46. What is immunity ? Write a note on the Various types of immunity.
47. Describe the structure of a neuron with the help of a neat , labeled diagram.

PART – II

48. i) Name the process by which a fruit is developed .
    ii) Explain the development process in brief.
    iii) Draw a neat , labeled a diagram of thatprocess.
49. a) What is Global village?
    b) What is the global electronic village?

PART – III

50. Calculate the number of moles in.
    a) 12.046×10^{23} atoms of copper
    b) 27.95 g of Iron
    c) 1.51×10^{23} molecules of Co_2
51. How will you establish the relation betweenVapour density and Molecular mass of a gas by applying Avogadro law?

PART – IV

52. What are the application of cryogens ?
53. A 5N Force acts on a 2.5 Kg mass at rest , making it accelerate in a straight line .
    i) What is the acceleration of the mass?
    ii) How long will it take to move the mass through 20 m?
    iii) Find its velocity after 3 seconds.