# District Institute of Education and Training <br> Zilla panchayat Road Chitradurga 

## 2020-21 model question paper - 1 (English medium)

Subject : Science.
Time : 3 hrs 15 minutes.

Subject Code : 83-E
Max.marks : 80

## PART - A (Physics)

I. Four alternatives are given fir each of the following questions/incomplete statements choose the correct answer along with its letter of alphabet. $4 \times 1=4$

1. When a current carrying conductor is placed in a magnetic field,the direction of magnetic lines will be in
A . direction of electric current.
B. longitudinal to magnetic field
C. opposite of electric current.
D . to magnetic field.

2 . Non - renewable source of energy among the following
A . Dry wood.
B. Sun..
C. Fossil fuels.
D. Air
3. "In a electric current the rate of electric fuse is 8 A " This sentence means
A. Fuse will not work when electric current is less than 8A
B. Power of electric fuse is equall to $8 \mathbf{w}$
C. Electric fuse will work only when electric current is less than 8A
D. Fuse will not work when electric current is more than 8 A
4. Ohm' s law will be represented as
A. I = V/R.
B. $I=V^{2} / R$.
C. $V=I R$
D. R = V / I.
II. Answer the following questions.

$$
2 \times 1=2
$$

5 . How do you connect Voltmeter to electric circuit to measure to voltage ?
6. What is the focal length of a lens ?
III. Answer the following questions.
$2 \times 2=4$
7. Draw a neat diagrame of series connection or resistor

8 . Write the uses of Solar cell?
IV . Answer the following questions. .
9. Write the schematic diagram of convex lens when object is placed in the following positions
1 ) on principal focus $\mathbf{F} 1$
2) behind 2 F 1

10 . Find out I) resistance ii) electric current in the given schematic diagram

11. a) voltmeter is connected parallely to resister why ?
b) write the S I units of I) electric current. li) resisstance
c) electricians while repairing electric instruments use Rubber hand glouse why ?

Or
a) What is electric resistance ? Name of the factors on which it depends
b) Alloys are used in electrical heating instruments why ?
V. Answer the following questions.
12. a) State differences between reflection and refraction of light ?
b.) What are the factors dies refractive index depends? What is the refractive index of glass

Or
What is Daipter ? State the power of convex and concave lens
VI . Answer the following questions.
13. Explain law you detect magnetic field lines arround bar magnet by using magnetic compass through experimental activity.State the properties of magnetic field lines

## PART - B (Chemistry)

VII. Four alternatives are given fir each of the following questions /incomplete statements choose the correct answer along with its letter of alphabet. $\mathbf{2 \times 1 = 2}$

14 . Identify correct statement regarding $\mathrm{Li}, \mathrm{Na}, \mathrm{K}$ metals are
A. These are having low density.
B. These are having low melting point
C. These can be cutted easily with knife.
D. Above all
15. Electronic configuration of element " $X$ " 2,8, 8, 1 and electronic configuration of element " Y " Then the type of bond between these two elements
A. Covalent bond.
B. Hydrogen bond.
C. Metallic bond.
D. Ionic bond
VIII. Answer the following questions.
16. In string acids $\mathrm{P}^{\mathrm{H}}$ value which ions are less in number ?

17 . Define Mendaleev's periodic law
18. What is an addition reaction ?
19. Give an example for metaloids

IX . Answer the following questions.
20. Kumar got tired of indigestion .His mother advices him to drink milk of magnesia why ? Write it's formula
21. What are structural isomers ? Name the first member of alkane which showes isomerism Or

What are saturated hydrocarbons ? Give example
22. In laboratory Pradeep takes. Test rubes $A$ and $B$ he takes iron nail and ferrous sulphate solution in test tube $A$ and in test tube $B$ he takes iron nail and copper sulphate solution. Then in which test tube dies displacement reaction takes place.State the answer with reason
$X$. Answer the following questions.
$3 \times 3=9$
23. Draw a neat diagrame of electric refining of copper and label the following parts
A ) Cathode
B) acidified copper sulphate solution
24. What is the valency of carbon ? Which are the two properties of carbon due to which plenty of carbon compounds are available around us ?

Or
Write the structural formulae of ethane,butene,pentyne
25. Write the diagram of testing conductance of salt sloution and label the following parts
A) Graphite rod
B) battery

XI . Answer the following questions.
$1 \times 4=4$
26 . Differentiate between Roasting and calcination. How these two processes are used in extraction of Zink ? Explain with the help of equations.Did reduction is necessary to obtain Zink after these two processes? Why
PART - C ( Biology )

XII . Four alternatives are given fir each of the following questions /incomplete statements choose the correct answer along with its letter of alphabet. $2 \times 1=2$
27. This habit is not a eco - friendly step
A. Rejecting plastic handbag.
B. Wasting water and food
C. Recycling plastic and glass
D. Reducing current consumption
28. Function of flowing back of fluid substance outside the cell to blood is carried out by
A. Red blood cells
B. Semi permiable membrane
C. Lymph fluid.
D. Blood.

XIII . Answer the following questions.
29. Name the disease in humans which occurs from ultra violet rays due to ozone depletion
30. What is water harvesting ?

XIV . Answer the following questions.

31 . Briefly explain the structure of nephron
Or
Explain translocation process on plants
32. Draw a diagram of longitudinal section of flower and label stigma in it
33. Why we should conserve forest andcwildlife ?

XV . Answer the following questions.
34 . Explain how male reproductive system strucutre does its function in men
Or
Which carefull precautionary measures taken to prevent spreading of sexually transmitted diseases
35. Draw aduagramof longitudinal section of heaetand label the following parts
A) left auricle.
B) pulmonary artery

36 . Pea plants with blue coloured flowers BB crossed with pea plants with white flowers BB
a) Which coloured flowers did first generation process ?
b) How much is the ratio of plants with white flowers in F 2 generation ?
c) $\mathbf{F} \mathbf{2}$ generation how much is the ratio of BB and BB

## Or

What is Mendal's di hybrid cross ? Clarify the result with the help of punnet board,when plants with round yellow coloured seeds ( $\operatorname{RrYy}$ ) are self pollinated

XVI . Answer the following questions.
37. What is the evolution ? Name the three evidences for evolution

38 . State the functions of the following harmones
a) Thyroxin.
b) Insulin
c) Adrenalin
d) Estrogen.

