

# District Institute of Education and Training

Zilla panchayat Road Chitradurga

2020 – 21 model question paper – 1 (English medium)

Subject : Science.

Subject Code : 83 - E

Time : 3 hrs 15 minutes.

Max.marks : 80

## PART - A ( Physics)

I . Four alternatives are given for 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 8A “ This sentence means

- A . Fuse will not work when electric current is less than 8A  
B. Power of electric fuse is equal to 8w  
C. Electric fuse will work only when electric current is less than 8A  
D . Fuse will not work when electric current is more than 8A

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 diagram of series connection of resistor

8. Write the uses of Solar cell?

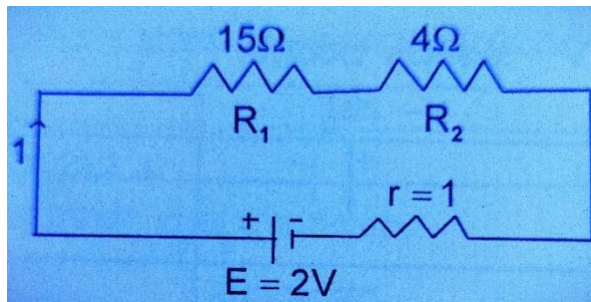
IV. Answer the following questions. .

$3 \times 3 = 9$

9. Write the schematic diagram of convex lens when object is placed in the following positions

- 1) on principal focus  $F_1$                       2) behind  $2F_1$

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



11. a) voltmeter is connected parallelly to resistor why ?

b) write the S I units of i) electric current.      ii) resistance

c) electricians while repairing electric instruments use Rubber hand glove 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.

$1 \times 4 = 4$

12. a) State differences between reflection and refraction of light ?

b.) What are the factors does refractive index depends? What is the refractive index of glass

Or

What is Diopter ? State the power of convex and concave lens

VI. Answer the following questions.

$1 \times 5 = 5$

13. Explain how you detect magnetic field lines around bar magnet by using magnetic compass through experimental activity. State the properties of magnetic field lines



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 solution and label the following parts

- A) Graphite rod                      B) battery

XI . Answer the following questions.

1 × 4 = 4

26 . Differentiate between Roasting and calcination .How these two processes are used in extraction of Zinc ? Explain with the help of equations. Did reduction is necessary to obtain Zinc after these two processes? Why

### PART – C ( Biology )

XII . Four alternatives are given for each of the following questions /incomplete statements choose the correct answer along with its letter of alphabet. 2 × 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 permeable membrane  
C. Lymph fluid.                      D. Blood.

XIII . Answer the following questions.

2 × 1 = 2

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.

3 × 2 =

6

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 and wildlife ?

XV . Answer the following questions.

3 × 3 = 9

34 . Explain how male reproductive system structure does its function in men

Or

Which careful precautionary measures taken to prevent spreading of sexually transmitted diseases

35. Draw a diagram of longitudinal section of heart and 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 possess ?
- b) How much is the ratio of plants with white flowers in F<sub>2</sub> generation ?
- c) F<sub>2</sub> generation how much is the ratio of BB and bb

Or

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

XVI . Answer the following questions.

2 × 4 = 8

37 . What is the evolution ? Name the three evidences for evolution

38 . State the functions of the following hormones

- a) Thyroxin.
- b) Insulin
- c) Adrenalin
- d) Estrogen.