This Question Paper contains 4 Printed Pages. AP MARCH 2015 SET - 1

New Syllabus

19E(A)

GENERAL SCIENCE, Paper - I

(English version)

Parts A and B

Time : 2½ Hours] **[Maximum Marks : 50**

Instructions :

1. *Answer the questions under **Part-A** on a separate answer book.*
2. *Write the answers to the questions under **Part-B** on the Question Paper itself and attach it to the answer book of **Part-A**.*

Part - A

Time : 2 Hours ***Marks : 35***

SECTION - I *5×2=10*

Note :

1. Answer **ANY FIVE** questions, choosing atleast **two** from each Group.
2. Each question carries **TWO** marks.

GROUP - A

1. State any two differences between Convex and Concave mirrors.

2. Write the Len's makers formula and explain the terms in it.

3. What do you mean by electric shock ? Explain how it take place ?

4. By observing steel vessels and different images in them, Ramu, a third class student asked some questions to his elder sister Santha. What may be those questions ?

GROUP - B

5. A mixture of Oxygen and Ethyne is burnt for welding. Can you tell why a mixture of Ethyne and air is not used ?

6. Which method do you suggest for extraction of high reactivity metals ? Why ?

7. Write any two uses and two properties of Covalent compounds.

8. Where do we use washing method in our daily life ? Give example. How do you correlate this example with enrichment of ore ?

SECTION - II

4×1=4

Note : 1. Answer **ANY FOUR** questions from the following.

2. Each question carries **ONE** mark.

9. What is Humidity ?

10. Define Critical angle.

11. What is the reason for using Tungsten as a filament in electric bulb ?

12. What is a Chemical bond ?

13. Name the simplest Hydrocarbon.

14. Mention two methods, which produce very pure metals.

SECTION - III

$4 \times 4 = 16$

Note :

1. Answer **ANY FOUR** questions, choosing atleast **two** from each Group.
2. Each question carries **FOUR** marks.

GROUP - A

15. Explain, why dogs pant during hot summer days using the concept of evaporation ?

16. How can you verify that a current carrying wire produces a magnetic field with the help of an experiment ?

17. Write about your favourite scientist / physicist.

18. A house has four tubelights, three fans and a television. Each tubelight draws 40 W. The fan draws 80 W and the television draws 100 W. On an average, all the tubelights are kept on for 5 hours, all fans for 12 hours and the television for 6 hours everyday. Find the cost of electric energy used in 30 days at the rate of Rs. 3.00 per KWH.

GROUP - B

19. Write the balanced chemical reaction for the following and identify the type of reaction in each case.

(A) $\text{Magnesium}_{(s)} + \text{Iodine}_{(g)} \rightarrow \text{Magnesium iodide}_{(s)}$

(B) $\text{Zinc}_{(s)} + \text{Hydrochloric acid}_{(aq)} \rightarrow \text{Zinc chloride}_{(aq)} + \text{Hydrogen}_{(g)}$

20. Rainbow is an example for continuous spectrum. Explain.

21. What is meant by water of crystallisation of a substance ? Describe an activity to show the water of crystallisation.

22. Comment on the position of Hydrogen in Periodic table.

SECTION - IV

$1 \times 5 = 5$

Note :

1. Answer **ANY ONE** of the following question.
2. This question carries **FIVE** marks.

23. Draw a neat diagram of an A.C. generator.

24. Draw a neat diagram of Reverberatory furnace and label its parts.

This Question Paper contains 4 Printed Pages.

New Syllabus

19E(B)

GENERAL SCIENCE, Paper-I

(English version)

Parts A and B

Time : 2½ Hours] **[Maximum Marks : 50**

Part - B

Time : 30 minutes ***Marks : 15***

Note :
1. *Answer **all** the questions.*
2. *Each question carries ½ mark.*
3. *Candidates must use the CAPITAL LETTERS while answering the multiple choice questions.*
4. *Marks will **not** be awarded in case of any over-written, re-written or erased answers.*

I. *Write the 'CAPITAL LETTERS' showing the correct answer for the following questions in the brackets provided against them.* *20×½=10*

1. Which of the following is a warming process ? **[.....]**

(A) Evaporation

(B) Condensation

(C) Boiling

(D) All the above.

2. Water at normal atmospheric pressure boils at ..... **[.....]**

(A) 0°C (B) 100°C

(C) 250 K (D) 50°C

3. If an object is placed at 'C' on the principal axis in front of a Concave mirror, the position of the image is .... **[.....]**

(A) at infinity. (B) between F and C.

(C) at C. (D) beyond C.

4. The mirror used by E.N.T. specialists is .... [.....]

(A) Plane (B) Concave

(C) Convex (D) None of these.

5. Which of the following is Snell's law ? [.....]

(A) $n_1 \sin i = \frac{\sin r}{n_2}$ (B) $\frac{n_1}{n_2} = \frac{\sin r}{\sin i}$

(C) $\frac{n_2}{n_1} = \frac{\sin r}{\sin i}$ (D) $n_2 \sin i$ = constant

6. The size of an object as perceived by an eye depends primarily on ... [.....]

(A) actual size of the object.

(B) distance of the object from the eye.

(C) aperture of the pupil.

(D) size of the image formed on the retina.

7. The current in the wire depends ..... [.....]

(A) Only on the potential difference applied.

(B) Only on the resistance of the wire.

(C) On potential difference and resistance.

(D) None of them.

8. Which converts Electrical energy into Mechanical energy ? [.....]

(A) Motor (B) Battery

(C) Generator (D) Switch

9. Three bodies A, B and C are in thermal equilibrium.
The temperature of B is 45°C. Then the temperature of 'C' is .... [.....]

(A) 45° C (B) 50° C

(C) 40° C (D) any temperature

10. The value of the focal length of the lens is equal to the value of the image distance, when the rays are ..... [.....]

(A) passing through the Optic centre.

(B) parallel to the Principal axis.

(C) passing through the Focus.

(D) in all the above cases.

11. $Fe_2O_3 + 2Al \rightarrow Al_2O_3 + 2Fe$ [.....]

The above reaction is an example of ...

(A) Chemical combination. (B) Chemical decomposition.

(C) Displacement reaction. (D) Double decomposition reaction.

12. What happens when dil. HCl is added to iron fillings ? [.....]

(A) Hydrogen gas is released.

(B) Chlorine gas is released.

(C) No reaction takes place.

(D) Iron salt and water are produced.

13. The colour of Methyl orange indicator in acidic medium is ..... [.....]

(A) Yellow (B) Green

(C) Orange (D) Red

14. A solution turns red litmus into blue, its pH is likely to be .... [.....]

(A) 1 (B) 4

(C) 5 (D) 10

15. If $l = 1$ for an atom, then the number of orbitals in its sub-shell is .... [.....]

(A) 1 (B) 2

(C) 3 (D) 0

16. Which of the following is the most active metal ? [.....]

(A) Lithium (B) Sodium

(C) Potassium (D) Rubidium

17. Electronic configuration of an atom is 2, 8, 7.

To which of the following elements, would it be chemically similar ? [.....]

(A) Nitrogen (Z=7) (B) Fluorine (Z=9)

(C) Phosphorus (Z=15) (D) Argon (Z=18)

18. An element 'A' forms a chloride ACl_4.

The number of electrons in the valence shell of 'A' is ..... [.....]

(A) 1 (B) 2

(C) 3 (D) 4

19. Galena is an ore of ..... [.....]

(A) Zinc (Zn) (B) Lead (Pb)

(C) Mercury (Hg) (D) Aluminium (Al)

20. 2 ml of ethanoic acid was taken in each of the three test tubes A, B and C, and 2 ml, 4 ml and 8 ml water was added to them respectively. A clear solution is obtained in ..... [.....]

(A) test tube 'A' only. (B) test tubes A and B only.

(C) test tubes B and C only. (D) All the test tubes.

II. *Fill in the blanks with suitable answers.*
Each question carries ½ mark. *5×½=2½*

21. Light selects the least time path to travel between two points. This principle was stated by .....

22. Speed of light in vacuum is ..... m/s.

23. Mirage is an example of .....

24. Myopia can be corrected by using ..... lens.

25.  is the symbol of .....

III. *Match the following.* *5×½=2½*

26. PCl_3	[.....]	(A) 'V' shape.
27. N_2	[.....]	(B) Pyramidal.
28. O_2	[.....]	(C) Double bond.
29. NH_3	[.....]	(D) Tetrahedral.
30. H_2O	[.....]	(E) Trigonal bi-pyramidal.
		(F) Triple bond.
		(G) Single bond.