

**Dr.K.K.R GOWTHAM EDUCATIONAL INSTITUTIONS-A.P**  
**GENERAL SCIENCE –PAPER I & II**  
**MODEL PAPER-1**  
**ENGLISH MEDIUM**

**Time: 3.15 Hrs**

**Max Marks: 100**

**Instructions:**

1. This paper consists of Part A & Part B
2. Part A contains Questions from Physical science & Part B contains from Biological science
3. Part A & Part B contains 4 sections each.
4. There are 33 Questions in the paper.
5. There is Internal choice in Section –IV of Part A and Part B.
6. Write all the questions visibly & Legibly
7. 15 minutes are given for reading the question paper.

**PART-A**  
**SECTION –I**

**Note: 1. Answer all the questions:**

**2. Each question carries 1 Mark**

**6 × 1= 6 M**

1. Find the focal length of plano convex lens, when its radius curvature of the surface is R and n is the refractive index of the lens.
2. What is the image distance in the normal human eye?
3. Choose the suitable answers of section-B with Section-A.

**SECTION-A**

**SECTION-B**

1. Formula for refractive index

P.  $\frac{V}{C}$

1. Possible value at refractive index

Q.  $\frac{C}{V}$

R.  $>1$

S.  $<1$

4. Molecular formulae of Bleaching powder is \_\_\_\_\_
5. What is Aufbau principle?
6. Statement 1:-  $n+l$  value of 3d is 5  
Statement 2:  $n+l$  value of 3d is 4  
Write the correct answer of the following in your Answer booklet.  
A) Both statements are correct                      B) Statement 1 is only correct  
C) Statement 2 is only correct                      D) Both statements are wrong.

**SECTION –II**

**Note: 1. Answer all the questions:**

**2. Each question carries 2 Mark**

**4 × 2= 8 M**

7. Convert  $25^{\circ}\text{C}$  into Kelvin Scale.
8. Draw the direction of magnetic lines of force, assuming that the current is flowing into the page.
9. Find the four quantum number values of 3<sup>rd</sup> and 4<sup>th</sup> electrons of Beryllium.
10. Mention two methods which produce very pure metals.

### SECTION –III

Note: 1. Answer all the questions:

2. Each question carries 4 Mark

4 × 4 = 16 M

11. Write the differences between evaporation and boiling
12. A house has 3-tubelights of 20 watts each-on the average, all the tube lights are kept on for 5 hours. Find the energy consumed in 30 days.
13. How do bond energies and bond lengths of molecule help us in predicting their chemical properties? Explain with examples?
14. The pH values of six solutions A,B,C,D,E,F are given as 5,2,1,3,7 and 9 respectively which solution is  
a) Neutral                      b) strongly alkaline                      c) strongly acidic                      d) weakly acidic?  
Arrange the pH in increasing order of Hydrogen ion concentration.

### SECTION –IV

Note: 1) Answer all the questions

2) Each question has Internal choice.

3) Each question carries 8 marks.

2 × 8 = 16 M

15. (a) Explain faraday's law of induction with the help of an activity  
[Or]  
(b) Write the experimental procedure to obtain the relation between angle of incidence and angle of refraction
16. a) What are the salient features of modern periodic table?  
[Or]  
b) Explain the structure of graphite in terms of bonding and give one property based on this structure.

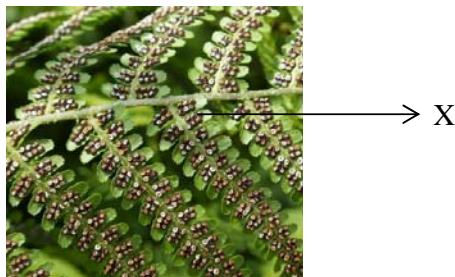
### PART-B SECTION –I

Note: 1. Answer all the questions:

2. Each question carries 1 Mark

6 × 1 = 6 M

1. Onion is the example for bulb, but what is the example for tuber?
2. Read the sentences find the error and rewire it.  
“Latha always uses cloth bags to purchase things from the market. This practice is an example for Recover”
3. Expand IUCN : \_\_\_\_\_
4. Name the scientist with the help of this paragraph.  
He did hydrilla plants experiment and noticed “Oxygen released from plants only in the presence of light.
5. Observe the diagram, identify the part ‘X’.



6. “Bio-diesel is made from the seeds of me and used as bio-fuel:. Who am I.

## SECTION –II

Note: 1. Answer all the questions:

2. Each question carries 2 Mark

4 × 2= 8 M

7. What happens if blood platelets are absent in blood?
8. Write slogans to popularize the awareness on ‘Organ Donation’?
9. What is Global Warming? What are the effects of it?
10. Write two sentences about insulin hormone using the data collected from your school library?

## SECTION –III

Note: 1. Answer all the questions:

2. Each question carries 4 Mark

4 ×4=16 M

11. Look at the following table and answer the questions.

Stimulus	Responding
Light	Phototropism-Stem
Water	Hydrotropism-Root
Gravity	Geotropism-Root
Touch	Thigmotropism- Tendrils
Chemicals	Chemotropism-Pollen Grains

- a) Mimosa pudica Plant leaves are example for which type of Tropism?
  - b) What is Hydrotropism? Give one example?
  - c) Plants also respond to external stimuli. How do you feel about this?
12. Suggest a simple experiment to prove the role of Palate in recognizing taste?
13. What question do you ask the nutritionist to avoid indigestion problem?
14. Presently farmers are using different types of chemical fertilizers to get more productivity from crops. By the soil gets more polluted. Suggest any two programmes to prevent soil pollution.

## SECTION –IV

Note: 1) Answer all the questions

2) Each question has Internal choice.

3) Each question carries 8 marks.

3 × 8 = 24 M

15. A) Male is responsible for sex determination of baby do you agree? If so write your answer with flow chart.

[Or]

B)



- A) What are the apparatus required to conducting g the experiment?
- B) What is the purpose of KOH in this experiment?
- C) What part of the leaf converted into blue black colour. Why?
- D) What solution is used to test for starch?

16. A) Explain the experiment conducted by your teacher in your class to show action of saliva on the starch.

[Or]

- B) Study the given paragraph and answer the questions.

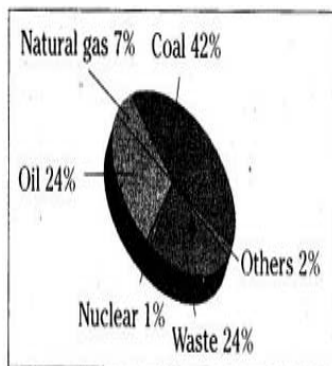
The valve present on the right auriculo –ventricular septrum between rights atricum and right ventricle is referred to as “ Tricuspid Valve. The valve. The valve present on the left auriculo-ventricular septrum between left atrium and left ventricle is referred as “Bicuspid Valve” or Mitral valve. A Major blood vessels that originate from right ventricle is Pulmonary aorta. The valves present at the region of pulmonary aorta are called “Pumonary Valves”.A major blood vessel originates from left ventricle is systemic aorta. The valve present at the region of systemic aorta are called “systemic valves”.

- A) How many valves are present in the heart?  
B) What is the valve that known as mitral valves ?  
C) Name the valve that allows deoxygenated blood from auricle to ventricle?  
D) Which is separating the atrium and ventricle?

17. A) Draw a neat labeled diagram of L.S. of Flower. What are the sexual parts in flower?

[Or]

- B) Observe the given pie diagram and answer the questions.



- 1) Identify the fossil fuels from the above diagram?
- 2) Why wastes should be considered as primary energy source in future?
- 3) Why can't we depend on fossil fuels forever?
- 4) What are the alternatives for fossil fuels?