

Roll No

MOCK EXAM-I for CSS-2024
GENERAL KNOWLEDGE-I
(GENERAL SCIENCE & ABILITY)

Name

2/5

TIME ALLOWED: THREE HOURS

PART-I (MCQS): MAXIMUM 30 MINUTES

PART-I (MCQS):

MAXIMUM MARKS = 20

PART-II

MAXIMUM MARKS = 80

- NOTE:** (i) Part-II is to be attempted on the separate Answer Book.
(ii) Attempt FOUR questions from PART-II, by selecting TWO questions from EACH SECTION. ALL questions carry EQUAL marks.
(iii) All the parts (if any) of each Question must be attempted at one place instead of at different places.
(iv) Candidate must write Q.No. in the Answer Book in accordance with Q.No. in the Q. Paper.
(v) No. Page/Space be left blank between the answers. All the blank pages of Answer Book must be crossed.
(vi) Extra attempt of any question or any part of the attempted question will not be considered.
(vii) Use of Calculator is not allowed.

PART-II
(SECTION-A)

- Q.2** (a) Describe different methods to estimate the age of the Universe. (05)
(b) What is 'Acid Rain'? Describe its causes and how it can be prevented? (05)
(c) What are Ceramics? Discuss their types and applications. (05)
(d) Discuss the structure and function of Human Kidneys. (05)
- Q.3** (a) What are Fat Soluble Vitamins? Discuss the sources, importance and deficiency diseases related to these vitamins. (05)
(b) Differentiate between a bacteria cell and a plant cell. (05)
(c) Define Semiconductors, explain its types and applications. (05)
(d) What do you know about 3R's Strategy? Explain its benefits (05)
- Q.4** (a) What are Sedimentary Rocks? Explain their properties and economic importance. (05)
(b) GPS is an accurate satellite-based system. Explain working and importance of GPS in modern world. (05)
(c) What is Hydrological Cycle? Discuss its importance (05)
(d) What is Global Warming? Write some suggestions to control the process of global warming. (05)
- Q.5** (a) Discuss different methods of Food Preservation. (05)
(b) Briefly discuss the causes of Water Pollution. How water pollution can be controlled? (05)
(c) Define the following terms; Internet Standards, Input Devices, System Software, ROM and RAM. (05)
(d) Briefly explain Solar and Lunar Eclipses with diagrams. (05)

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Q:b

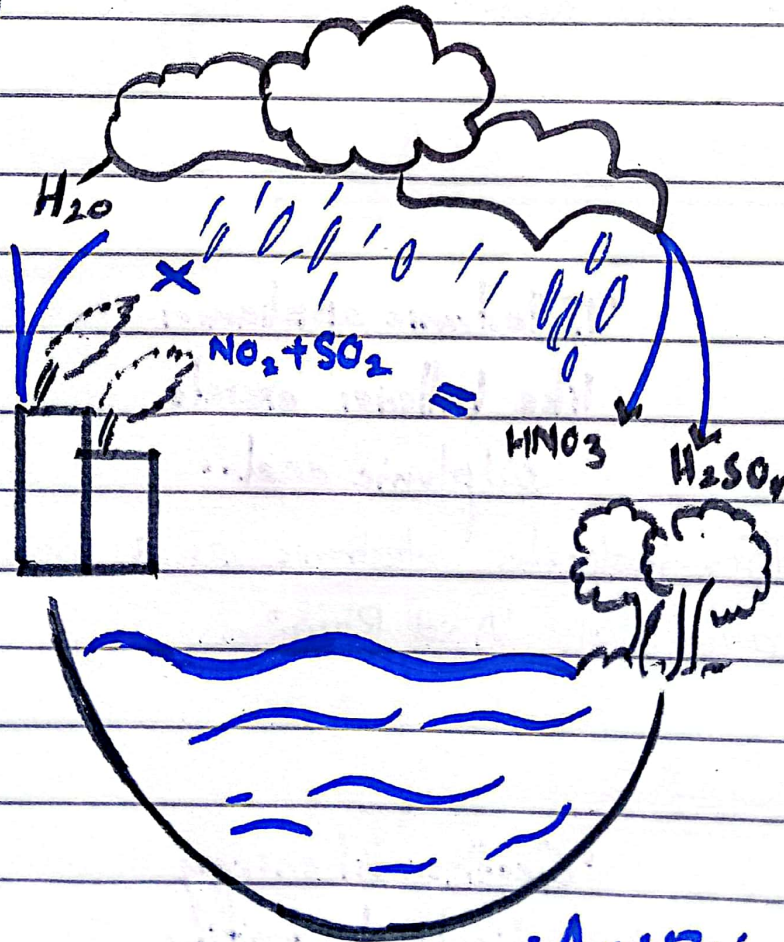
Answer:-

Acid Rain

"Any acidic kind of precipitation, called as "Acid Rain"."

(Oxford Dictionary)

Acid rain is the most acidic kind of rain or any kind of precipitation. The acidic condition of water, often called acid rain.



Acid Rain

2. Causes of "Acid Rain"

Following are causes:

i) Industrialization

"Industrialization is a chief source of removal of toxic substances."

Thus, industrialization is a chief cause of "Acid Rain".

ii) Electronic substances

"Electronic appliances like batteries excrete sulphuric acid."

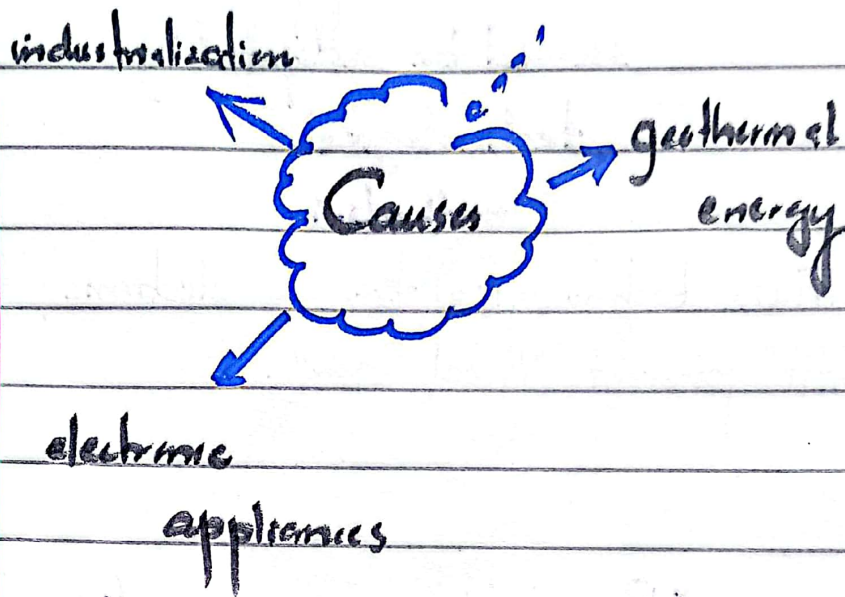
This indicates electronic as a main cause of "Acid Rain".

iii) Geothermal energy

"Geothermal energy contributes to toxicity"

of rains."

Hence, geo-thermal energy causes "Acid Rain".



3- Preventions of "Acid Rain"

Following are preventions:

i) Sustainable urbanization

"Sustainable urbanization leads to natural environmental stewardship."

Thus, sustainable urbanization is a

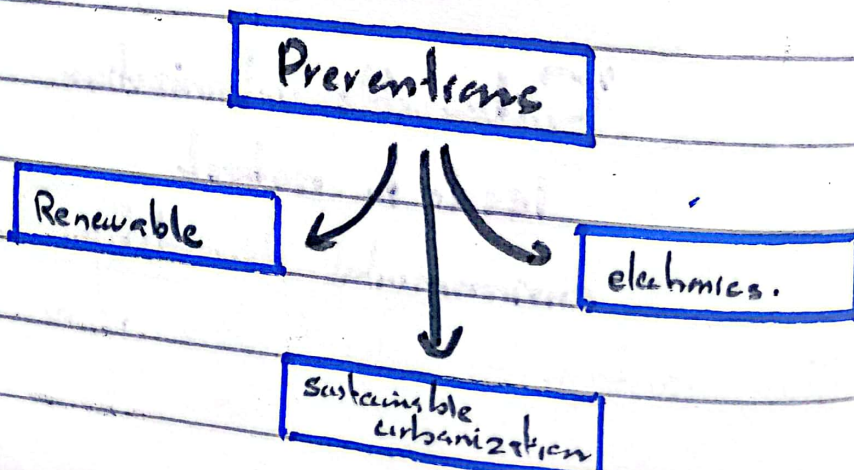
method of prevention of "Acid Rain".

- (ii) Usage of fluorescent electronics.
"Electronic appliances should be adopted by technological methods."

Thus, technological-based electronic will prevent "Acid Rain".

- (iii) Renewable energy generation.
"Renewable energy generation is a soft solution to prevent Acid rain."
(The World Bank)

Thus, renewable resources must be adopted.

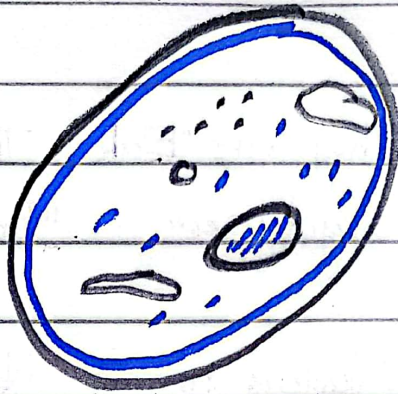


3
Q b

Answer Plant Cell

"Plant cell is a multi-nucleated cell."

Plants are living being. They are multi-nucleated cells.

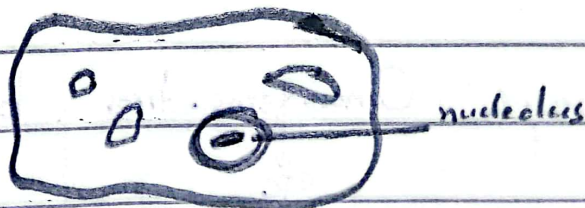


(Structure of a plant cell)

2- Bacterial Cell

"Bacterial Cell is a uni-nucleated cell."

Bacteria are unicellular. They have uni-nucleated cells - prokaryotes.



(Structure of a bacterial cell)

3. Difference between a plant cell and a bacterial cell

<u>Comparison</u>	<u>Plant Cell</u>	<u>Bacterial Cell</u>
i) <u>Meaning</u>	Plants are multicellular -	Bacteria are unicellular.
ii) <u>Cell type</u>	They are "Eukaryotes"	They are "Prokaryotes"
iii) <u>Nucleus</u>	Nucleus is present.	Nucleus is absent.
iv) <u>Organelles</u>	All necessary organelles are present, including mitochondria, golgi bodies etc.	All organelles are unlike absent in bacterial cell like mitochondria.
v) <u>Examples</u>	Corn, ferns - trees etc	bacterial cells.

(SECTION-B)

- Q.6 (a) Do as directed:
- (i) If ZYXW is to 32425262, then TRPN is to what?
 - (ii) Complete the series. $P_3QR, P_4QS, P_5QT, \dots, P_7QV$.
 - (iii) Form the proper word from the letters "ORHIMTE"
 - (iv) Choose the right one. Insect : Disease :: War : ? (Defeat or Chaos)
 - (v) Pick the odd one out from the series. 396, 462, 572, 427, 671, 264.
- (b) A man leaves half his property to his wife, one third of his son and the remaining to his daughter. If the daughter's share is Rs. 15,000. How much money did the man leave? How much money did his wife get and what is his son's share? (05)
- (c) Bano walks 5 km towards the South and then turns to the right. After walking 3 km, she turns to the left and walks 5 km. What direction is she facing right now? (05)
- (d) Given that simple interest on a certain sum of money is Rs. 4016.25 at 9% per annum in 5 years. Find the sum of money. (05)
- Q.7 (a) (i) If $A = \{1, 3, 5, 7, 9, 11\}$ and $B = \{1, 2, 3, 13\}$, then find $A \cap B$. (2.5)
- (ii) Find $A \cup (B \cap C)$, if $A = \{1, 3, 5\}$, $B = \{2, 4, 6\}$ and $C = \{1, 5, 7\}$. (2.5)
- (b) Using the Remainder Theorem, find the remainder when $x^6 - 5x^4 + 3x^2 + 10$ is divided by $x - 2$. (05)
- (c) Discuss the following: (05)
- (i) Social Ability
 - (ii) Numerical Ability
- (d) A man invested a total amount of Rs. 50,000 in two schemes. The rate of returns on two schemes is 5% and 6% p.a. respectively. He earned Rs. 2800, during the last year as a profit of his investment. How much he invested in each scheme? (05)
- Q.8 (a) Tickets numbered 1 to 20 are mixed up and then a ticket is drawn at random. What is the probability that the ticket drawn bears a number which is a multiple of 3 or 5? (05)
- (b) The present age of Khalidah and Bushrah is in the ratio 3:4. Five years back, the ratio of their ages was 2:3. What is the present age of Khalidah? (05)
- (c) A train running at the speed of 56 km/hr crosses a pole in 18 seconds. What is the length of the train? (05)
- (d) A person can swim in water with a speed of 13 km/hr in still water. If the speed of the stream is 4 km/hr, what will be the time taken by the person to go 68 km downstream? (05)



Q: 6(b)

Answer

Data

$$\text{Son's share} = \frac{x}{3}$$

$$\text{Wife's share} = \frac{x}{2}$$

$$\text{Daughter's share} = x$$

$$\text{Daughter's share (amount)} = 15,000$$

How much money did men leave?

What's share of son and wife?

Solution

As per data =

$$x - \left(\frac{x}{3} + \frac{x}{2} \right)$$

$$x - \left(\frac{2x + 3x}{6} \right)$$

$$x - \frac{5x}{6}$$

$$\frac{6x - 5x}{6}$$

$$\frac{x}{6} = 15,000$$

$$x = 90,000$$

Thus, left amount is 90,000

Now, share of son =

$$\frac{x}{3} = \frac{90,000}{3} = 30,000 \text{ Rs.}$$

and, share of wife =

$$\frac{x}{2} = \frac{90,000}{2} = 45,000$$

Therefore, Total amount = 90,000 Rs.

Wife's share = 45,000 Rs

Son's share = 30,000 Rs

Daughter's share = 15,000 Rs