Dos and Don'ts for the General Science & Ability Paper

Hi there — you've prepared well! Remember, knowing the content is one thing, but presenting it in the paper exactly as required is another. Here are a few key points to keep in mind:

1. For a 5-mark part, aim to write at least 2 and at most 3 sides of the answer sheet. Often, a question has two or three parts, and the marks are divided accordingly, so address each part fairly.
2. Manage your time wisely — you have about 35 minutes per full question, which comes down to around 8 minutes for each 5-mark part. Stick to this to avoid rushing later.
3. Make your answers look scientific, not just theoretical. Use flowcharts and diagrams wherever they add clarity.
4. Neatness matters — keep your handwriting clean, avoid cutting or overwriting.
5. Mind your spelling and grammar — while GSA doesn't deduct marks for these, your expression leaves an impression.
6. In the ability portion, explain analytical ability questions in words. For a 5-mark part, show all steps and provide clear explanations.

Good luck for CSS 2026 — you're going to ace it, in sha Allah! 🌟

GSA

Part - I

Section - A

Q.No 2

(a)

Structure of universe according to big bang theory

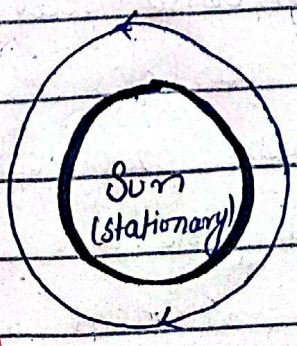
The universe came into existence about 13.7 billion years ago. Most astronomers believe the universe came into being in a Big Bang.

Structure of universe:

Before big bang the universe was inside a bubble. It suddenly exploded and the universe was born. After explosion, the particles of matter and anti-matter were produced. They destroyed each other, but some matters survived. These matters form proton and neutrons when universe was one second old. After next three

minutes, the temperature goes below three billion degree centigrade. The proton and neutrons come together to form hydrogen and helium. In the next 300000 year, the temperature is colled to about 3000°C. The atoms capture electrons and form more atoms.

An astronomer Nicolas Copernicus proposed **heliocentric model** for the universe, in which the Sun is stationary at the centre, while the other objects like Earth revolves around the Sun.



(b)

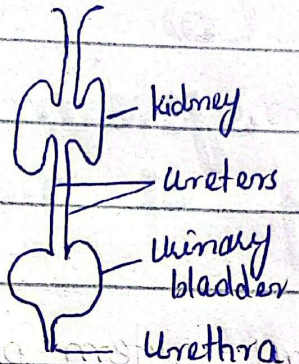
Urinary system and the working of nephron

The urinary system plays an important role in the removal of waste from human body, and nephrons present in kidney help in the excretion of wastes.

Urinary system:

The urinary system consists of kidneys, bladder and urethra, is involved in the removal of wastes from human body.

The kidney is involved in the filtration of blood from which waste is segregated, urinary bladder stores it for some time, and through urethra, the urine is moved out of body.



2- Structure of nephron:

The nephron is structural and functional unit of ~~nep~~ kidney. It consists of

2.1- Renal corpuscle:

- Glomerulus
- Bowmann's capsule

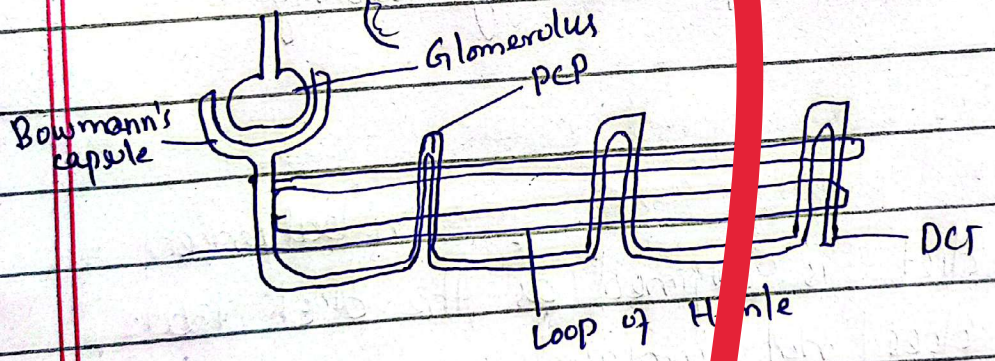
2.2- Renal tubule:

- Proximal convuluted tubule
- Loop of Henle
- Distal convuluted tubule
- Collecting duct

3- Working of nephron:

The blood enters into glomerulus through afferent arterioles. Water, salts, glucose

amino acids, and waste products are filtered into Bowman's capsule. The fluid formed is called glomerulus filtrate. Selective reabsorption occurs in PCT. Useful substances are reabsorbed into blood. In loop of Henle, water and salts are reabsorbed to maintain osmotic balance. Tubular secretion occurs in DCT. Excessive ions are secreted into tubule. The remaining fluid passes into collecting



duct. Water reabsorption here is regulated by antidiuretic hormone. The fluid passes from kidney to bladder through ureter and then outside the body.

(c)

Un-balanced diet and how it affects healthy living.

A balanced diet is the one that contains essential nutrients required for body growth and metabolism. A balanced diet is essential for healthy living.

1- Un-balanced diet:

Un-balanced diet is defined as the diet that does not contain proper proportion of nutrients required for body growth and metabolism. An un-balanced diet contains either excessive or low nutrients, not balanced proportion of nutrients.

2- Effects of un-balanced diet on healthy living:

2.1- Carbohydrates:

Excessive: Excessive intake of carbohydrates result in increase blood glucose level leading to diabetes and obesity.

Low: Low intake of carbohydrates leads to hypoglaemia.

2.2- Proteins:

Excessive: Excessive intake of proteins results in slow metabolism.

Less: Less intake of protein results in breaking of cells, poor hair growth and muscle disintegration.

2.3- Fats:

Excessive: Excessive intake of fats results in various diseases like high cholestrol, Low-density lipoprotein.

Less: Less intake of fat does not provide energy and heat to body. Moreover, fats present in cell membrane play important role in metabolism.

4

(d)

Structure and function of

Cell wall:

Structure: Cell wall is present in plants and fungi. In plants, it is made up of cellulose, while in fungi, it is made up of chitin.

Function: Cell wall present in plants and fungi protects the cell from shrinking as well as from foreign matter.

Cell membrane:

Structure: It is a thin, flexible boundary that surrounds the cell. It is composed of phospholipid bilayer, proteins, carbohydrates and cholesterol.

Function:

It is involved in selective transportation. It allows selective movement of nutrients inside and outside the cell.

Cytoplasm:

Structure: Cytoplasm is present in eukaryotes.

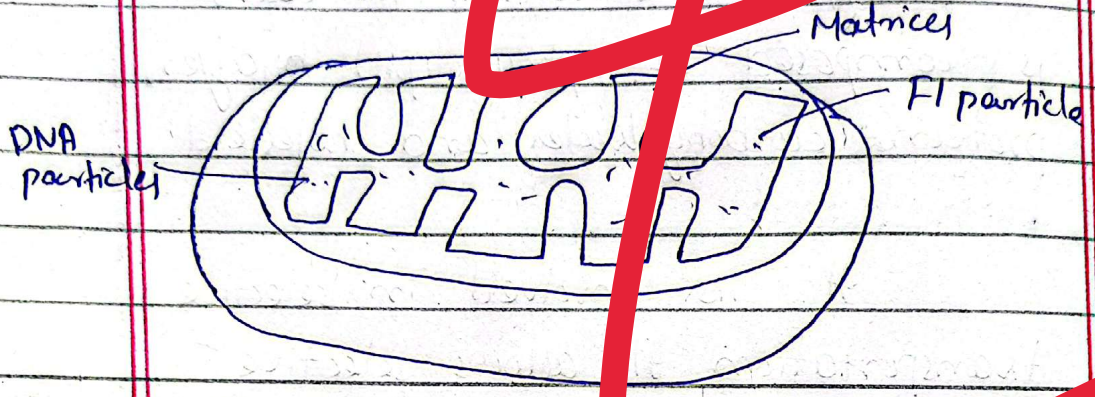
Function:

Cytoplasm is involved in many metabolic processes like glycolysis, Krebs cycle. It is also involved in free-floating movement.

Mitochondria:

Structure: Mitochondria is an

organelle. It consists of cisternae, F1 particles, matrix, DNA.



Function:

Mitochondria is involved in the production of ATP.

QNO3

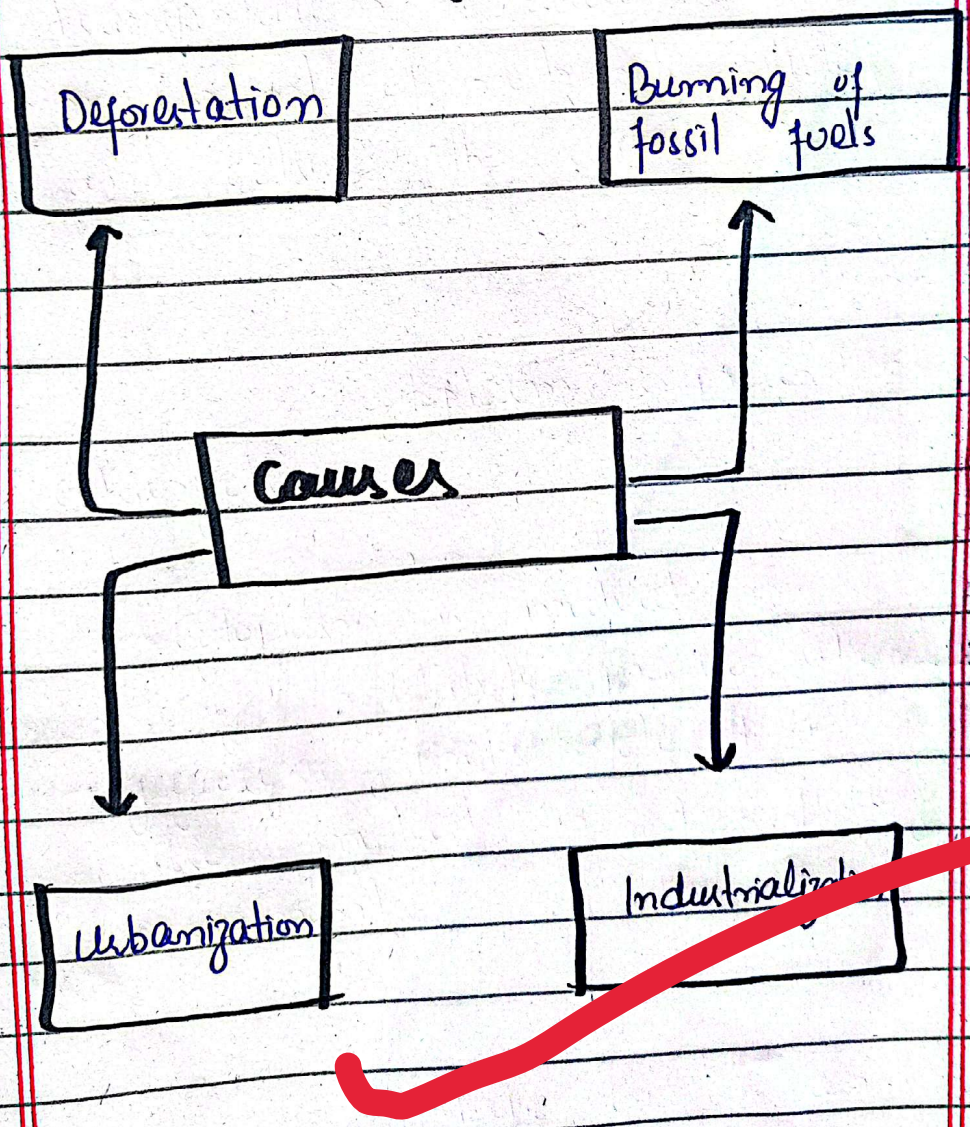
How global warming can be reversed?

Global warming is the most pressing issue of contemporary world. It is the need of hour to control its sources and adopt preventive measure.

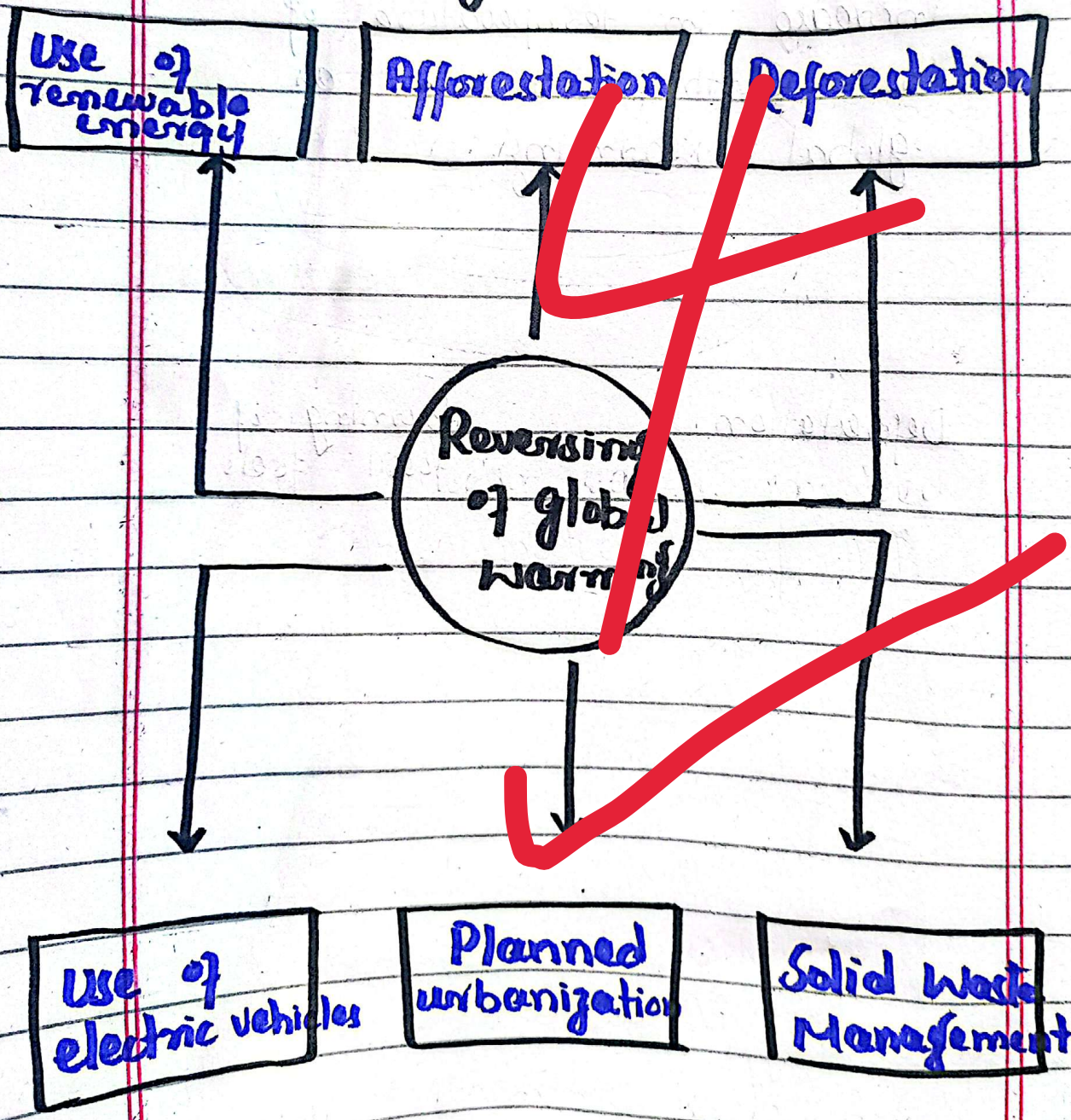
1- Global warming:

An average increase in temperature of the Earth is known as global warming.

2- Causes of global warming:



3- Reversing of global warming



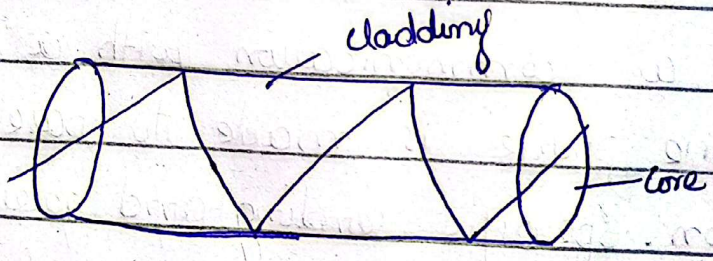
(c)

Working of Optic fibers:

The optic fibers are the fibers used in telecommunication

Structure:

The optic fiber consists of core and cladding.



Working of optic fiber:

The signal ~~light~~ emitting from source is converted into light with the help of light emitting diode, and it travels into fiber. At the end the light is again converted into its

original signal, and conveyed to consumer.

Mobile phone:

The mobile phone is widely used in today's world. It is mostly used for communication.

Working:

In an area, there is a communication with a mobile phone is made to base station. Specific sending and receiving frequencies are assigned to cell. As a mobile proceeds from one cell to another, a central controller reroutes the call. The call is sent to a person with whom the person wants to talk.

(a)

Food additives:

Food additives are the chemicals which are added to food products to enhance the quality of product.

e.g:

Potassium nitrate

b) Food preservatives:

The chemicals or substances which are used to enhance the shelf life of food products are called food preservatives.

For example:

Sorbate is an example of food preservation.

c) Food adulteration:

Food adulteration

is a process in which substances are added intentionally in food products to gain more profit.

e.g:

Water in Milk.

Food contamination:

The process in which substances are added unintentionally in food products are called food contamination.

e.g:

Nuts and bolts in tea.

Section- B

QNO 7

a) Given data:

$$40\% \text{ of } x = \frac{2}{3} \text{ of } y$$

To find:

$$x : y$$

Solution:

$$40\% \text{ of } x = \frac{2}{3} \text{ of } y$$

$$\frac{40}{100} x = \frac{2}{3} y$$

$$\frac{2}{5} x = \frac{2}{3} y$$

$$\frac{x}{y} = \frac{2}{3} \times \frac{5}{2}$$

$$\frac{x}{y} = \frac{5}{3}$$

$$\boxed{x : y = 5 : 3}$$

(b)

Given data:

Price of 17 balls = Rs 720

Loss = Cost price of 5 balls

To find:

Cost price of a ball = ?

Solution:

$$\text{Loss} = \frac{\text{Cost price} - \text{Sale price}}{\text{Cost price}}$$

Let the cost price = x

$$5x = \frac{x - 720}{x}$$

$$5x^2 = x - 720$$

$$5x^2 - x + 720 = 0$$

(c)

Given data:

Let son age = x

Let man's age = $x+24$

After two years.

Son's age = $x+2$

Man's age = $2(x+2)$

To find:

Present age of son =

Solution:

$$x+24 = 2(x+2)$$

$$x+24 = 2x+4$$

$$2x-x = 24-4$$

$$x = 20$$

Son's age = 20 years old

(d)

Given data:

Rashid time = 6 hours to write 32 page

Kamran = 5 hours to write 40 pages

To find:

Time to write 110 pages = ?

Solution:

Rashid speed $= \frac{16}{\cancel{32}_{3}} = \frac{16}{3}$ per hour

Kamran speed $= \frac{40}{\cancel{8}} = 8$ per hour

Combined speed $= \frac{16}{3} + 8$

$= \frac{40}{3}$ pages/hr

Time $= \frac{\text{total pages}}{\text{combined speed}}$

$= \frac{110}{\frac{40}{3}} = 110 \times \frac{3}{40}$

$= \frac{33}{4}$ hours.

QN08

a) A is to right of B

B A

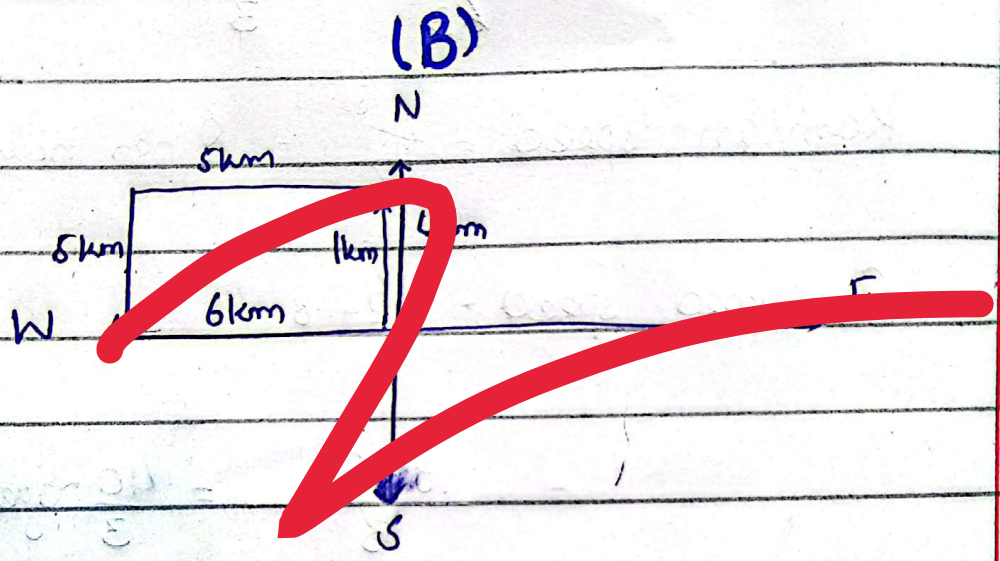
E is to left of C

A E C

B is right of D

D B A E C

A is in the middle of house.



a) 13km away from the place

b) North direction

c) After second turn, South direction

d) South direction

(c)

a) THIRS

SHIRT

b) AOTC

COAT

c) EOUBSL

d) KTRIS

SKIRT

e) RETAEWS

Sweater

(d)

Triangle in the figure

30 triangles in the figure.