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.

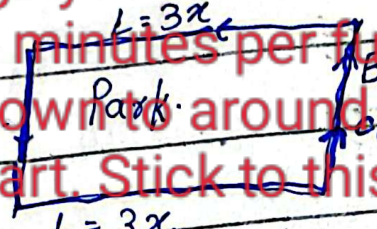
Good luck for CSS 2026 — you're going to ace it, in sha Allah! 🌟

Question-6

(A)

According to the statements, the woman's granddaughter is the daughter of Ahsan's brother. It means that woman's granddaughter is Ahsan's niece. Thus, the woman who is granddaughter of Ahsan is also the grandmother of Ahsan.

(B)



Given: Ratio of length and width = 3 : 2

So, the length = 3x and breadth = 2x

Speed = 12 km/hr = 1200 m/minute = 200 m/minute

Time = 8 minutes

To find: Area of park = length × width

Formula Solution:

Speed = distance / time ⇒ Distance = Speed × Time

Distance / Total perimeter = 200 × 8 (m)

= 1600 m.

Perimeter = L + L + W + W

= 3x + 3x + 2x + 2x

$= 10x = x =$

It means, length $= 3x = 160 \times 3 = 480m$.

Breadth $= 2x = 2 \times 160 = 320m$.

Area of park $= (480 \times 320)m^2 = 153600m^2$

480 × 320 = 153600

(C)

Given: Two digit number, let it be xy. x is unit digit and y is decimal digit.

According to statement, $x = 2y$.

So, the number $= xy = (2y)(y) = 2y^2$.

second condition.

$(xy) \times (x+y) = 144 \Rightarrow (2y^2) \times (2y+y) = 144$.

$2y^2 \times (3y) = 144 \Rightarrow 6y^3 = 144$

$y^3 = \frac{144}{6} \Rightarrow \sqrt[3]{y^3} = \sqrt[3]{24}$.

$y \approx 2.3$

$x = 2y$, then $x = 2 \times 2.3 = 4.6$.

It indicates that number is 42.

(D)

Ratio $= 2:3 \Rightarrow$ So, the numbers will be $2x$ and $3x$.

If $x = 7$, then the numbers will be $2(7) = 16$ and $3(7) = 24$.

As L.C.M = 48, so.

2	16, 24
2	8, 12
2	4, 6
3	2, 3
	1, 1

$8 \times 2 \times 3 = 48$

So, the sum of number is
[illegible] = 40

Q.7.
(A)

According to the given condition, two number are x and y simultaneously.

So,

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

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

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

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

So ratio of first to second number is $\frac{5}{3}$

(C)
(B)

Loss = Cost price − Sale price.

Suppose, the age of man = x.
The age of man's son = y.
According to given statement.

$x = y + 24$ ——— (1)

Making table

Past Age	Present Age	Future age.
	Man = $x = 24 + y$	$x + 2 = 2y$.
	Son = y = ?? To find.	Son = $y + 2$.

$x + 2 = 2y$.

Placing the value of x from (1)

$(y + 24) + 2 = 2y$

$y + 26 = 2y$.

$26 = y$.

So, the son's present age is 24 years.

(Q)

Time taken by Rashid to complete types 32 pages = 6 hours.

In 1 hour Rashid types $\frac{32}{6}$ = 5.3 pages.

Time taken by Kamran to type 40 pages = 5 hours.

In 1 hour Kamran will type $\frac{40}{5}$ = 8 pages.

If they work together for 1 hr, they will complete:

$\frac{1}{5.3} + \frac{1}{8} = \frac{8 + 5.3}{42.4} = \frac{13.3}{42.4}$

$\frac{1}{4}$ = pages completed by them in 1 hr = 4 pages.

Time to complete one page = $\frac{1}{4}$ hour.

For 110 pages = $\frac{110}{4}$ = 27.5 hours.

Thus, 27.5 hours will be required to complete 110 pages.

Q.3. Section-A

Q.3.

(A).

Global warming:

It is a long-term and gradual increase in the temperature of earth mainly due to human activities.

How Global warming can be ~~prevented~~ Reversed?

(i) By shifting to green sources of energy:

currently, Co, CH_4 (methane) and other gases released from fossil fuels

accounts for 67% of greenhouse gases that are making the globe warm. Therefore, shift towards Hydel energy, nuclear energy and solar energy etc. is needed to reverse ~~impacts of climate change~~ global warming.

ii) Reforestation is needed to reverse global warming:

According to Bonn challenge 2011, 350 million square kilometer of forests have been wiped out. Therefore, reforestation is needed in these areas to absorb greenhouse gases, increase moisture and improve shade which can reverse global warming.

iii) Population explosion must be controlled:

According to Intergovernmental panel on climate change (IPcc), world's population has increased to 8 billion. It leads to increase in industrialisation and transportation which leads to global warming. Thus, effective population control strategies can reverse emissions which are adding to global warming.

iv) Green urbanization can reverse global warming:

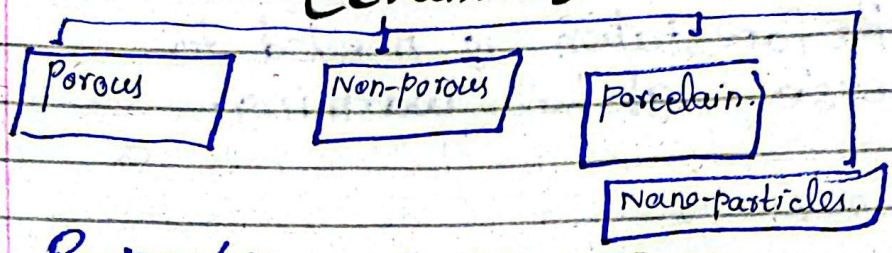
According to world's green building council, 40% of global emissions comes from building materials. Thus, environmental friendly steel and aluminium, that release less carbon, can decrease emissions leading to reversal of global warming.

(f)

Defination of ceramics:

Hard, brittle and ~~non~~ porous non-conductors that are manufactured under very high temperature.

Ceramics.



Properties of ceramics:-

(i) **Porous ~~=~~ to non-porous.**

Ceramics may be porous or non-porous. Delft and Magelids are non-porous ceramics while those of nano-particles are porous.

(ii) **Require very high temperature:**

Ceramics require extremely high temperature. Porous ceramics require 1000°C while porcelains require 1200-1500°C for formation.

(iii) **Hardness and Brittleness varies with temperature:**

They are extremely hard. However, nano-ceramics are ultrafine particles that are used in technological sectors.

Application of ceramics:

(i) **Used to make ~~chairs~~ tables:**

Ceramics are used to make tables. Especially non-porous ceramics are ideal for making tables.

(ii) **cooking Utensils:**

Ceramics are used to make cooking utensils. Especially porcelain is used for this purpose.

(iii) **Technological applications:**

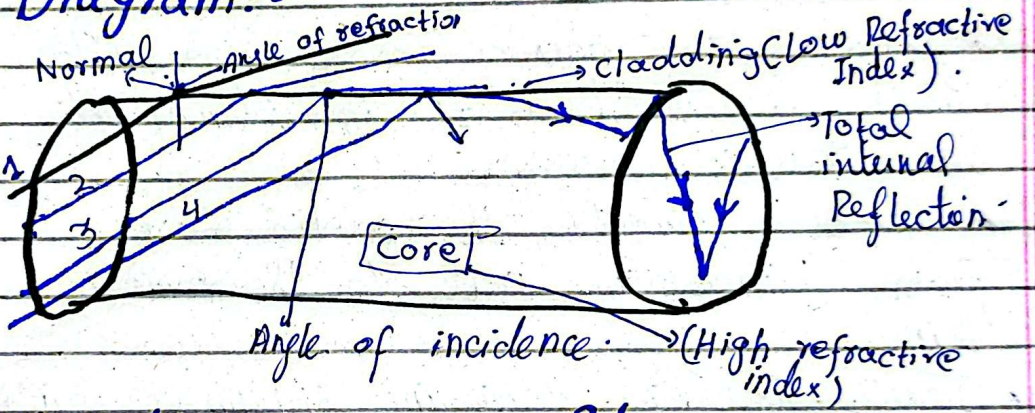
Ceramics are also used in semi-conductor industry. Nan ceramics are mostly used for this purpose.

(c)

Optic fibres:

These are the glass threads used to transmit light signals to long distances.

Diagram:-

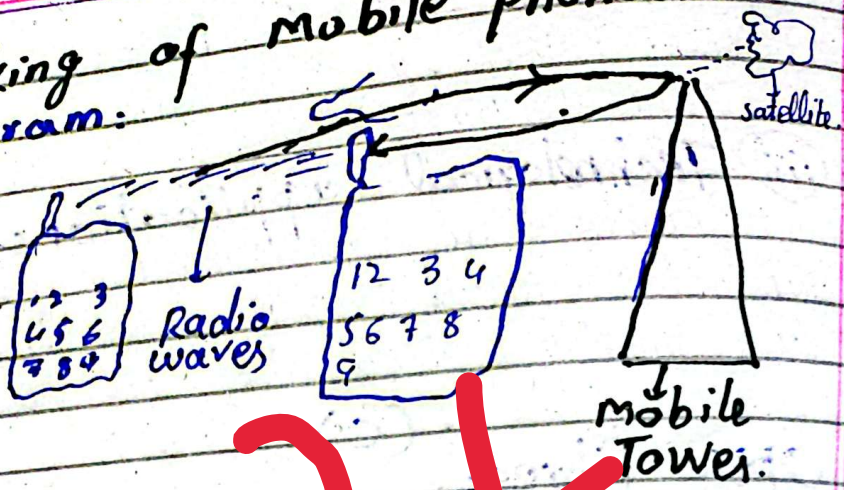


Working of optic fibres.

- When a ray of light strikes core-cladding boundary, it bends.
- The bending of light occurs at angle of reflection.
- When the angle of refraction is 90°, angle of incidence is called critical angle.
- When angle of incidence increases that of Critical angle, light bends internally resulting in reflection of light inside the core.
- Through this total internal reflection, light signal reaches the other end.

Working of Mobile phones:

Diagram:



Explanation:

- Mobile phones communicate with each other though wireless Telecommunication.
- When a person from one mobile dials a number, it is identified by nearby tower.
- Tower diverts the radio waves from incoming call to the receiving line.
- Tower identifies receiving number with the help of satellite.

(D)

1) Food additives:

Substances that are added to the food to improve its color, shelf life or nutritious values are called food additives.

Examples:

- Guar Gum is used to increase volume of food.
- phospholipids are used as emulsifies in commercial Ghee.

2) Food preservatives:
These are the substances which are added to the food to prevent biological or chemical deterioration of it.

Examples:
EDTA and vitamin E preserve food like canned beans via anti-oxidation.

3) Food adulteration:
Substances that are advertently added by the people in pure food for economical gains.

Examples:
Water added to the milk to increase its volume.

4) Food preservatives contaminants:
Substances that are inadvertantly added to food which decrease its nutritive value.

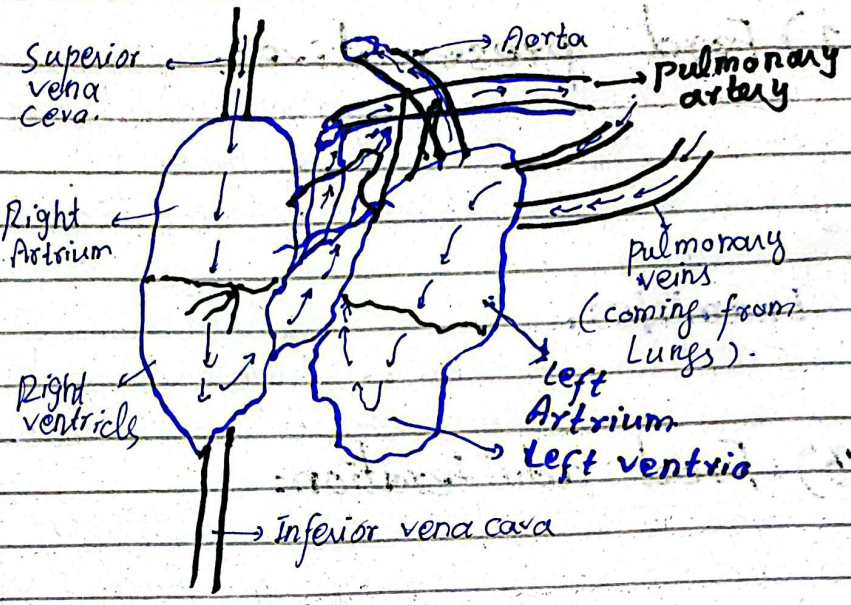
Example:
Fungal deterioration of meat during transport.

Q. 4.

(A)

Role of Heart in circulation:
Heart is a pumping organ that pumps the recieved blood between lungs and the body.

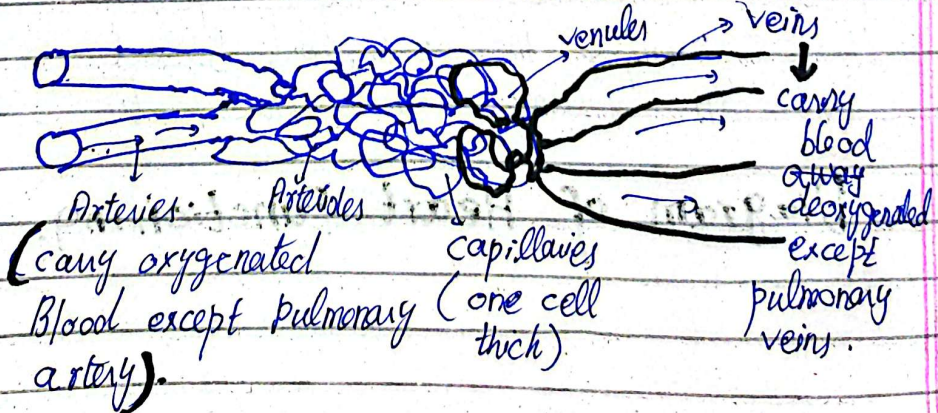
Diagram of Heart Functioning:



Explanation of Functioning:

- Heart consist of 4 chambers.
- Its Right artrium recieves blood from Superior and infeior vena ceva and ~~pulmo~~ which is deoxygenated Blood.
- Right artriem pumps blood to right ventricles which pumps the same blood to pulmonary trunk.
- Pulmonary artery takes blood to lungs, where it gets oxygenated.
- ~~Right~~ Left artrium Recieves blood from pulmonary veins which is oxygenated.
- Left ventricles pumps oxygenated blood to whole body via aorta.

Diagram of the role of veins:



Role of blood vessels in circulation:

Bf. Arteries carry oxygenated blood away from heart.
- Arteries divide into arterioles which further divide to capalleries.
- In capalleries, cellular exchange of oxygen and nutrients takes place.
- capalleries again join to form venules which mahes veins.
- veins carry de-oxygenated blood towards heart.

(B)

Cyclone:

Cyclone is a system of high-speed rotating winds formed under atmospheric pressure, and coriolis effect. Gradient

Parts:

Parts of cyclone include eye, eyeball and Ring.

Formation of cyclone.

Cyclone is formed of two pawo forces i.e. Atmospheric pressure and corrolis effect. radient

D Pressure Gradient.

On the Ocean and seas, the evaporation takes place. When evaporated vapors rise to height, they are condensed releasing heat. Heat lowers the pressure of surrounding coastal winds. Resultantly, high-speed wind from surrounding moves from high pressure area to low pressure

area resulting in cyclone.

2) Coreadis effect:

It is a force that tends to move the wind to right in northern hemisphere and to left in Southern hemisphere opposite to the gravitational force of earth.

when it combines with high pressue winds. It results in cyclone.

(C)

Carbohydrates:

- Carbohydrates instantly provides energy to body e.g. dates
- Carbohydrates form the structue of body e.g. cellulose in plant's cell wall.

Proteins:

- Proteins shape muscles e.g. Globular proteins.
- Proteins provides immunity to body e.g. immunoglobulins

Fats:-

- Fats are the reserved source of energy i.e. provide 2.25 times energy that of carbohydrates
- Fats are important in Nervous

functioning: e.g. myelin sheath made up of fats.

Calcium:

- Calcium is essential for function of skeleton because their is important part of bone.
- Calcium is essential for healing

Iron:

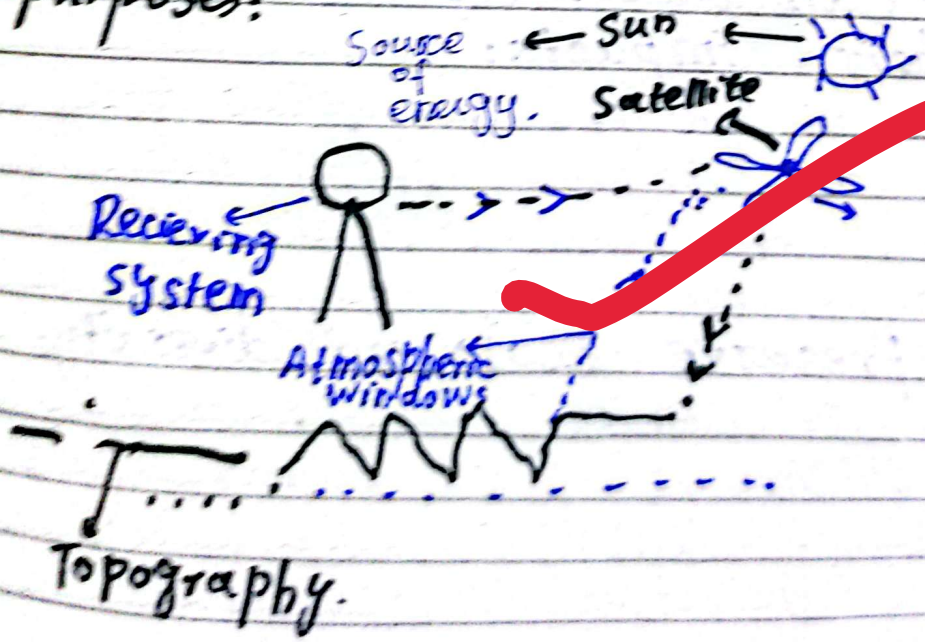
- Essential for red blood cell function e.g. Iron in [illegible] group of haemoglobin
- Iron is essential for providing immunity to the body.

(D)

Remote sensing:

It is the remote and smart study of earth and its atmosphere with the help of satellite.

Diagram to show the remote sensing for environmental purposes:



Explanation:-

Remote sensing use special waves like Infrared or Ultra-violet radiations to send signals to the earth and recieve it which are called atmospheric windows.

ways to use Remote sensing for environmental purpose.

(i) Check Deforestation:

Remote sensor satellites can remotely check forest cover in an area and send it to earth station. For example, LIIM+ satellite can be used for this purpose.

(ii) Can ensure sustainable urbanization:

Remote sensor satellites can send and recieve signals to check planning initiatives in urban centres e.g. LANDSAT+ can ensue this purpose.

(iii) Can detect disasters before their impacts:

Remote sensing can captue image of the cyclones, tornadoes and floods which can help in early warning and monitoring.

(iv) Preserve ecological diversity:

Remote sensing satellites can maintain ecological balance. Through use of SeaWiFS remote sensing, it can detect the life under water.