

Dos and Don'ts for General Science & Ability Paper

DATE / / 20

M T W T F S

Hi there, you've done well. Know that acquiring knowledge is one thing and reproducing it in paper according to what's asked is another. There are a few things I would like to highlight.

PART II

SECTION I ⇒

1. A 5 marks part requires at least 2 and at max 3 sides of a paper. Know that there can be two or three parts of a question and their marks are divided accordingly. So, address all of them in a just manner.

Q. Define the term mal-nutrition, elaborate its major cause and consequences.

Malnutrition:

2. Focus on time management. You get 35 minutes to solve one question and about 8 minutes per 5 mark part. Manage your time accordingly.

3. You need to understand that your paper is supposed to look more scientific than theoretical. So, add flowcharts and diagrams where required.

4. Your handwriting and neatness can be really impactful. Avoid cutting and overwriting.

5. Focus on your spellings and your grammar.

6. In ability portion, give explanation for analytical ability question in words. You need to understand that a 5 mark part requires all steps written and explained.

Here, in GSA there's no deduction in marks but your expression will definitely create an impact.

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Good luck for CSS 2025. You're gonna rock in sha Allah. :)

(i) Health conditions:

Some health conditions deplete the body of essential nutrients. Like problems in the absorption of nutrients i.e. Vit B₁₂.

(ii) Unawareness:

Lack of awareness regarding balance diet is another key factor contributing to the mal-nutritional nation. People do not know about the quantities of nutrients required in their daily diet. They keep on consuming a single nutrient like carbohydrate or protein and their diet lacks vitamins and minerals which results in mal-nutrition.

(iii) Consumption of junk food:

Consumption of unhealthy food like junk food and ignoring the healthy diets also results in mal-nutrition.

CONSEQUENCES OF MALNUTRITION:

Mal-nutrition is the root cause of many harmful diseases and abnormalities.

The mal-nourished mother will give birth to unhealthy and abnormal babies with anomalies.

The deficiency of certain vitamins can cause incurable diseases i.e. vit D deficiency causes rickets, vit B₁₂ deficiency causes

Proper account of consequences is required

anemia and neuropathic disease, vit A deficiency causes eye problems etc.

Q.2 Differentiate between food contamination and adulteration.

Food contamination:

Food contamination is the mixing of any contaminant in the food making it unhygienic and sometimes harmful to health. The contaminants like any foreign particle, bacterial growth or fungal growth making the food unhealthy. The chances of food contamination is higher in processed food items. The food under go many stages to be processed, carelessness in any of the stage ^{causes} the mixing of contaminants in the food. So food contamination is the result of carelessness and accidentally mixing of the contaminants in the food.

Food adulteration:

The intentional mixing of any other constituent in the food in order to gain profit is the world wide practice of the food industries. This is termed as food adulteration.

Draw a line and enlist differences

Food adulteration comes in the category of crime as it is an intentional act which results in harmful effects on health by destroying the food quality. Examples of food adulteration are mixing chemicals in milk and eatable items, etc.

c. What are computer buses? Differentiate RAM and ROM.

Computer buses: Communication System:

The ~~components~~^{System} which helps in the transfer of data between the computer's components.

Three types of computer buses:

(i) → Address bus

This part transfers memory from the processor to other components.

(ii) Data bus:

Transfers data from the processor to other components.

(iii) Control bus.

Transfers control signals from the processor to other components.

Differences between Ram and ROM

RAM

- ✗ Random-access memory
- ✗ It is volatile
- ✗ Removed after shutting down the device.
- ✗ It is smaller in size a few MBs.
- ✗ Stores the temporary memory.

ROM

- ✗ Read-only memory
- ✗ It is non-volatile
- ✗ Does not get removed.
- ✗ It is larger in size 2GB - 16GB.
- ✗ Helps in processing.

- d. What are Geo-stationary satellites? Distinguish natural and artificial satellites. How many satellites of Jupiter are there?

Geo-stationary satellites:

The satellites which rotate with the earth orbit and are placed above the earth equator are called Geo-stationary satellites. They appear stationary from the earth.

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because of their revolution along with the earth orbit. They complete their ~~complete~~ ~~rev~~ one revolution in 24 hours.

Natural Satellites :

The satellites which are naturally present in the space are termed as natural satellites. They rotate around every planet along their orbit.

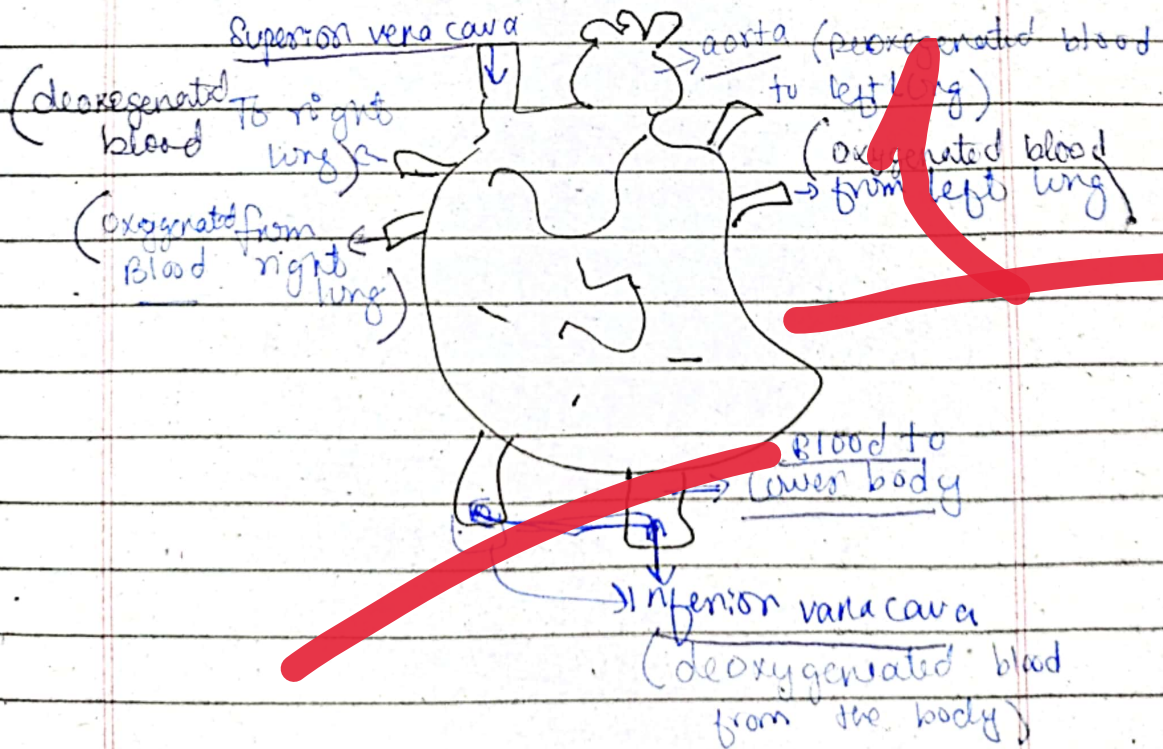
Artificial satellites

Artificial satellites are man-made satellites, sent to the space through space technology.

Q.3 What is meant by the term double circulation. Briefly describe how the heart is adapted to keep blood flowing in double circulation.

Double circulation:

The heart is a vital organ of the body which pumps blood to all over the body and removes waste from the body. Heart works with the mechanism of double circulation.



Firstly the blood collects the deoxygenated blood from the body through superior and inferior vena cava. Then the blood is pumped to lungs for oxygenation. The oxygenated blood is then pumped back to the heart and distributed to all parts of the body through aorta.

Q. → Liver as Chief chemist:

Liver as a chief chemist:

- → Liver functions to purify our blood from filtering out toxins.
- → Liver regulates the normal sugar level of the blood
- → Liver regulates blood clotting
- → Liver does other functions as well.
- Liver has the phagocytic cells called Kupfer cells which helps in eliminating the dead blood cells and bacteria from the blood.

c. Green house effect is a blessing:

Greenhouse effect is a blessing as it maintains the temperature of the earth to a certain degree Celsius by making the earth survivable for the living creatures. Otherwise the temperature of the earth would have been less than 0°C , making the earth as cold as Mars and the survival would have been difficult.

Enhanced green house effect and its relation in Global warming:

Enhanced green house effect leads to the accumulation of green house gases causing global warming. The consequences include increased ocean temperature, melting of glaciers, natural disasters i.e. cyclones, storms, flooding and droughts. Reorestation, higher use of electrical equipments, burning fossil fuels and automobiles gases all contribute to enhanced green house effect.

d) Working of a GPS:

GPS, Global Positioning System, is a radio navigation system owned by the US Govt. Initially it was called NAVSTAR, based on the constellation of satellites owned by the U.S. The 31-well-placed, orbiting satellites work on the principle of trilateration and locate distances accurately. The users with sensors and receivers within the orbit of any three of the satellites, pinpoint their exact location. The GPS device when receives signals from the GPS satellites it applies mathematical formulas to accurately determine the location and position of the user. These are three segments of GPS, Satellite segments, control segments and user segments. They work together to determine location, distance and speed of the user.

Working of mobile :

The microchip in the phone ~~may~~ converts the radio signals into electrical signals and then they are captured by a cell phone tower and are transferred. When the signals are received by ~~and~~ the other side, the signals are converted into radio signals. The electrical signals cannot be transferred on their own rather the cell phone towers are used ~~and~~ work by connecting to the cellular network.

Add subheadings and explain properly

Being generic won't help it

Section II

Q No 6

a) \rightarrow Enrollment in January \rightarrow 850 students
2022Enrollment in January 2023 \Rightarrow 1120 studentsPercentage increase $\rightarrow ?$

Solution:

Percentage increase \rightarrow

$$= \frac{\text{Increase in number}}{\text{Initial number}}$$

$$\text{Increase} \Rightarrow 1120 - 850 = 270$$

$$\Rightarrow \frac{270}{850} \Rightarrow 0.317$$

$$\begin{aligned} \therefore \% \text{ age increase} &= 0.317 \times 100 \\ &= 31.7\% \end{aligned}$$

(b)

Man is 5 times older than son:

Let man's age = y Let son's age = x

$$\text{Man's age } (y) = 5(x)$$

Two years ago :

$$(y^2 + x^2) = 114$$

$$(5(x))^2 + x^2 = 114$$

Squaring B.S :

$$\sqrt{25x^2 + x^2} = \sqrt{114}$$

$$5x + x = 10.67$$

$$6x = 10.7$$

$$x = \frac{10.7}{6}$$

$$x = 1.78$$

Age of son is 1.78 years.

Q.

Speed of the car during the first half = 140 km/h

During 2nd half = 60 km/h

Average speed = ?

Average speed \Rightarrow
$$\frac{\text{First half speed} + \text{2nd half speed}}{\text{Total number of speeds}}$$

~~Average speed $\Rightarrow \frac{40 + 60}{2}$~~

~~$\Rightarrow \frac{100}{2}$~~

~~Average speed = 50 km/h~~

~~&~~

QNo 8:

a)

Formula for the area of the outer view of worship halls:

The outer view of worship halls is square in shape:

Area of the square \Rightarrow
~~Area = l^2~~

$$A = l^2$$

b. Mixture is = 60 l

Ratio of milk : water = 2 : 1

If ratio is 1 : 2

what quantity of water to be further added?

Solution:

2:1 means 3 parts of 60l

$$\Rightarrow \frac{60}{3} = 20$$

Water is 1 ratio means 1(20)

$$\Rightarrow 20 \text{ l}$$

milk is 2 ratio means 2(20)

$$= 40 \text{ l}$$

If the ratio reversed : 1:2

Water is 2 in this case $\Rightarrow 2(20)$

$$\Rightarrow 40 \text{ l}$$

milk is 1 = 1(20)

$$= 20 \text{ l}$$

20l water 20 liter of water is to be further added.

c) A brother of B
B sister of C
C father of D

D is the nephew of A. and A is the uncle of D.

d. Code : ROAR : URDU

Recoding

R - 3 steps forward U
 O 4 steps forward R
 A 3 steps forward D
 R 3 steps forward U

URDU written in code ROAR

U 3 steps forward → X
 R 4 steps forward → V
 D 3 steps forward → G
 U 3 steps forward → X

XVGX is the new code
 for URDU → when written
 in ROAR code.

Explain in words