

Dos and Don'ts for General Science & Ability Paper

PART - II

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.

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.

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

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.

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

if a minute it provides access to the
the required information.

AI Become a part of life like Electricity :

Like electricity has become a part
and parcel of everybody's life in this
way AI has also become a part of
life. From charging a cell phone
to making daily plans we all are depend-
ent on AI.

AI act as an Energy by Giving
Knowledge :

For the material things to move
electricity provides an energy. For
the human being to move, knowledge
is essential which is provided by the
AI.

As someone has rightly said:

'AI is the new electricity'



Ans (b)

Working of CPU :

CPU stands for the Central Processing Unit is a computer hardware. It operates on the instructions given to him in the form of inputs through the keyboard. Then search in the stored data and give a response. The response is based on the information / data which are put to it. Moreover it also regulates the whole working of the system.

Working of a Brain :

Human brain works on the responses which have given to it through the five senses. The brain interprets the situation and accordingly produce action or response. For instance, if someone has touch heat of hot then he/she suddenly get rid of it. The hands give the instructions is sensed the situation and brain interprets it.

Resemblance of CPU with Human Brain

1. Receiving Responses

Like human brain, CPU accepts responses from the keyboard. The information is fed to it in any kind. The CPU give information accordingly to it.

2. Giving reactions on the basis of stored information when the information or raw data has been put into it. It interprets and produces response on the basis of stored information.

3. Control Working of Systems like human, brain. CPU controls the whole system. All the data is stored in it and control the working of the whole system.



Ans (c)

Balanced Diet:

A diet containing all the essential nutrients necessary for the normal growth and development of a body is called balanced diet.

Composition of Balanced Diet:

A balanced diet is composed of adequate amount of following nutrients:

Proteins → muscle movement

Water → act as carrier

vitamins → regulate the reactions.

Carbohydrates → store energy

lipids → protect cells

Deficiency symptoms:

Vitamin A:

- Vitamin A is present in the carrots.
- Its deficiency results in loss of vision.

Vitamin B:

- Vitamin B is mainly present in the green vegetables.
- Its deficiency leads to dementia and anaemia in human body.

Vitamin C:

- Vitamin C is present in pulses.
- Its deficiency leads to sickle cells.

Ans (d)

Optical Fiber:

Optical fibre are the cables used to transmit information over a long distances in the form of light.

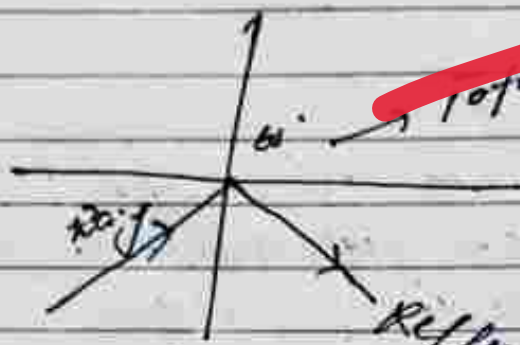
Composition of Optical Fiber.

Optical fibre is composed of:

- Core → transmit signal
- Cladding → prevent losses
- Jacket → prevent physical losses
- Buise → give types of recognition

Working of Optical Fibre:

Optical fibre operates on the principle of total internal reflection when light strikes the core at 60° angle. It bounces back in the core and travel in this way.



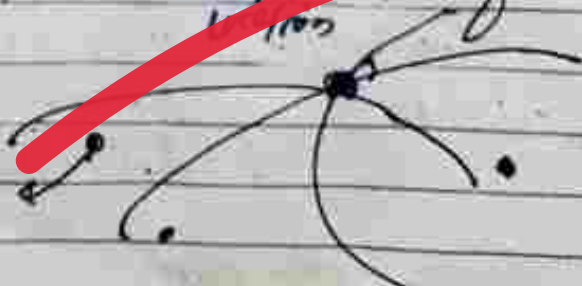
total internal reflection.

Global Positioning System: (GPS)

It is defined as the network of satellites used to locate the objects on the earth. It is helpful in mapping and used to know locations based on various businesses.

Measurement of 2D and 3D Locations:

When a person opens its location it comes under the location of many satellites. Various satellites started making circles. When the $m \& n$ of the circle intercept at a place it is the exact location of that person.



satellite

Q. NO. 03

Ans (a)

Why atoms form chemical bonds?
Atoms form chemical bond because of following reasons:

1. To Gain Stability

Atoms in their loneliness are unstable because of the incomplete share of electrons. That's why form bonds with other atom to gain stability.

2. To Complete its valence shell

Most of the atoms have less number of electrons in their valence shell. They form bonds with other atoms to gain or lose electron to complete its valence shell.

3. To Gain The Configuration of Noble Gases:

Noble gases are stable because they have complete their valence shell. So by making bonds the atoms gain the configuration of nearest noble gas and become stable.

Covalent Bond in a water molecule:

Water forms two covalent bonds between hydrogen and oxygen. Oxygen is carrying 2 lone pairs of electrons which is adjusted by the hydrogen molecule.



Water molecule has single covalent bond with other water molecule and a double covalent bond with the oxygen atom. These three atoms share electrons among themselves to form covalent bond.

Ans (b)

Doping:

Doping is the process of adding some impurity atoms in a pure semiconductor to increase the conductivity of that semi-conductor.

Ways to Do Doping:

Doping can be done in two ways
1. n-type dopant
2. p-type dopant
are added to form an n-type semi-conductor.

Ceramics:

Ceramics are defined as pots and other articles made from the clay heated by heat.

Types of Ceramics:

Porcelain
stoneware
Earthenware
Tile
Bone China
Brick
And many more—

Ans (c)

Global Warming:

Global warming is a phenomenon in which average risk of global temperatures happen by trapping of heat in the atmosphere.

Merits of Global Warming:

1. Ice age can be prevented.
2. Fewer deaths occurs due to arctic conditions.
3. Longer growing season and the increase in agricultural productivity.
4. Previously untapped oil and gas might become available.
5. Different passages blocked due to the ice might be open.

Demerits of Global Warming:

1. Changes in ocean circulation and result in warmer temperature.

2. Higher sea levels resulting in the flooding of low lands.

3. Deserts become drier leading to increased desertification.

4. Increase of spread of diseases.

5. Cultural and heritage sites are destroyed.

Ann (d)

Polio:

Polio is a viral disease resulting in the convulsions of joints especially in the babies.

Causes of Polio:

1. Viral infection

2. Lack of hygiene

3. Immigration from other countries.

4. Weak immune system

Challenges in Eradication of Polio:

1. Misconception about vaccine.

2. Killing of the workers

3. Lack of awareness

4. Bad hygiene conditions

5. Insufficient cleanliness of the sewerage

6. Afghans coming from their native country

7. Insufficient taking of healthy diet

8. Weak immune system

Section II

Q. NO. 06

Ans (4)

Data:

Ratio of blocks

$$A : B : C : D = 4 : 7 : 3 : 1$$

respectively

To Find:

The number of B blocks = ?

Solution:

$$\text{Sum of shares} = 15$$

$$A's \text{ share} = \frac{4}{15}$$

$$B's \text{ share} = \frac{7}{15}$$

$$C's \text{ share} = \frac{3}{15}$$

$$D's \text{ share} = \frac{1}{15}$$

Equation:

$$A = 50 C$$

$$\frac{4}{15} = \frac{50 \times \frac{3}{15}}{15}$$

$$\frac{4}{15} = 10$$

$$4 = 10 \times 15$$

$$= \frac{10^5 \times 15}{4} = \frac{75}{2}$$

B's share:

$$\frac{7}{15} \times \frac{75}{2} = 5$$

$$\frac{35}{2}$$

Ans. (d)

Date:

Original cost of pair of shoes = 80 ₹
Discount = 15%
Sales tax = 10%

To Find:

Final Price = ?

Calculation:

$$\text{Discount} = 80 \times \frac{15}{100}$$

$$= 12 ₹$$

$$\text{Sales Tax} = 80 \times \frac{10}{100}$$

$$= 8 ₹$$

$$\text{Final Price} = 80 + 12 - 8 = \boxed{84 ₹}$$

Ans. (e)

Date:

Distance travelled by train = 42 km.

Speed = 36 km/hr.

Departure time = 4 p.m.

To Find:

Arrival time = ?

Calculation:

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}}$$
$$= \frac{42}{36} = \frac{7}{6} = 1.17$$

28²⁰

Approx. 1 hr 20 minutes.

Then the train arrives at 4 + 1:20
= 15:20 pm

Ans (d)

(i)

SUPERINTENDED.

(ii)

WHITE

Q. NO. 07

Ans (a)

Data:

Radius of cylinder = 30 cm
Height = 1 m

To find:

Volume of cylinder = ?

Calculation:

$$V = \pi r^2 h$$

$$r = 30 \text{ cm} = \frac{30}{100} = 0.3 \text{ m}$$

$$V = 3.14 \times (0.3)^2 \times 1$$

$$V = 3.14 \times 0.9 \times 1$$

$$V = 2.82$$

Ans (b)

Given:

Avg. age of 3 dogs = 15 years
Ratio of ages = 3:5:7

To find:

Age of youngest dog: ?

Calculation:

Let

A's ratio = 3

B 4 + 5

C 4 = 7

Sum of ratios = 15.

$$A's \text{ age} = \frac{3}{15} = \frac{1}{5} = 0.2$$

$$B's \text{ age} = \frac{4}{15} = \frac{1}{3} = 0.33$$

$$C's \text{ age} = \frac{7}{15} = 2.2$$

Youngest age = 0.2 years

Ans (c)

(i)

Multiples series → Not a complete multiple.

(ii)

Prime number series.



End