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Batch : 67

Paper : General Science

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

Section 1
Q. Answer 1

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:

Artificial Intelligence (AI)

Artificial Intelligence (AI) is revolutionizing

the healthcare industry by improving

diagnostics, treatment planning,

and operational efficiency.

However, alongside its advantages,

it poses several ethical,

legal, and social challenges.

1) Potential Benefits

faster and accurate diagnosis.

AI algorithms help in analyzing

medical images (X-rays, MRIs)

and lab results with

and accuracy.

Personalized Treatment Plans.

AI uses patient history and

genetics to recommend

tailored treatments.

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 fully.

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, insha Allah! 🌟

Remote Monitoring of Patients.
wearable AI devices track
heart rate, glucose levels,
and oxygen saturation in real time

Efficient Data Management:
AI streamlines electronic health
records, reducing human error.

2) Challenges

Data Privacy and Security:
Storing and processing personal
medical data raises ethical
and legal concerns.

Improve your handwriting and presentation

Costly Systems:
Buying and running AI technology
is expensive for hospitals in
developing countries.

Lack of human feelings.
AI can't show care or emotional
support like human doctors

Job fears:
many workers worry that AI
will take over their jobs.

Impact on Patients.

patients get better care because
AI finds diseases early and
reduces waiting time. But
human doctors are still very
important for final decisions
and emotional support.

Question (2)

1) Big Bang theory.

The Big Bang theory says that
our universe started from
a very small, hot, dense point.
Then it exploded and started
growing. This happened about
13.8 billion years ago.

This theory was proposed by
George Lemaitre and advocated
by George Gamow. According to
big bang theory, universe was
created in gigantic explosion
called big bang. Universe came
into existence is 13.8 billion
years ago. There was no time
and space before big bang.

2) Importance

It helps us understand how the

time, and matter started.
it tells us how stars, planets &
galaxies were formed
it supports many space studies
& modern physics.

3) Proofs of the Big Bang theory

Cosmic Radiation:

A weak light called "cosmic microwave Background Radiation" is found every where in space. it is leftover heat from the Big Bang.

Redshift of Galaxies:

when scientists looked at galaxies they saw the most of them are moving away from us. This shows that the universe is expanding.

simple elements.

Hydrogen and Helium were the first elements formed. we still find them in the same amount the theory predicted.

Galaxies structure:

The way galaxies are spread in space matches the model

of an expanding universe.

Question (3)

Global warming.

Global warming means the Earth is getting ~~hotter~~ hotter over time. This is mostly because of human action that increase greenhouse gases in the air.

1) Causes of Global warming

Burning fuel:

Using coal, oil, and gas in factories, cars, and power station release carbon dioxide.

Cutting trees:

Forest clean the air, but deforestation reduces this benefit.

Factory and farm gases.

factory and farm gases give off harmful gases like methane and nitrous oxide.

2 Effect of Global warming

Melting of Global Ice and
Rising Seas:

Glaciers are melting and ocean
levels are going up, flooding
coastal areas.

Bad weather:

more droughts, floods, heatwaves
are happening around the world.

Less food water:

Crops doesn't grow well in
extreme weather, causing food
shortages.

Harm to animals and plants.

Some to animals are going
extinct because their natural
homes are disappearing.

5) Role of Human Body

Use clean energy
solar, wind, hydro power
can replace coal and oil.

Plant more trees.

Trees help absorb carbon
dioxide from the air.

Recycle and save resources

Less waste and smart energy use can reduce pollution.

Global Cooperation.
Countries must work together like in the Paris Climate Agreement to reduce emissions.

Question (4)

Disaster.

Disaster like floods, earthquakes and fires can cause great harm. A disaster management plan helps to reduce damage and save lives before, during and after a disaster.

Key Parts of Disaster Management:

Mitigation (Risk Reduction)

Building stronger houses, flood barriers and enforcing safety laws to prevent damage.

Preparedness:

Telling people what to do during emergency drills and

setting up warning system.

Response:

Rescue ~~teams~~ teams, medical help, and food supply during the disaster.

Recovery:

fixing roads, homes and helping affected people return to normal life.

Examples:

2005 Earthquake in Pakistan.
help from the army international NGOs and emergency shelters saved thousands.

Japan's Earthquake Plan:
Their schools and buildings are designed to handle quake. regular drills keep people ready.

NDMA (Pakistan)

The national Disaster Management authority works to plan and respond to national emergencies.

Question (1)

Tropical cyclone.

A tropical cyclone looks like a whirlpool that is found out in the tropics. It looks like a huge mass of air that just rotates they are more alike in shape than cyclones.

Characteristics of Tropical cyclone

- 1) Strong Rotating winds.
- 2) Eye of the cyclone
- 3) Heavy Rainfall & Storm surges
- 4) Low pressure

Formation process:

Warm ocean water
cyclones form over oceans
with temperatures above 26°C

Warm air:

The warm air water heat
the air above which rise
and create low pressure.

cloud formation.

The moist air rises, it cools and forms storm clouds.

Rotation Due to Earth's Spin
The storm starts rotating
due to Earth's rotation.

Development of a Cyclone
if the system keeps gaining
energy and grows, it becomes
a full cyclone.

Factors influencing intensity.

Ocean temperature

wind speed and direction

moisture in the air

high pressure & low pressure
areas nearby.

Impact on coastal communities

flooding and destruction
of homes

loss of lives & injuries

infrastructure damage.

spread of waterborne diseases

Question (2)

Remote sensing means collecting information about Earth's surface without physical contact usually through satellites, drones or aircraft using cameras or sensors.

Uses in Environmental monitoring.

Tracking land use
Vegetation health
Climate change observation
Disaster management.

Advantages.

Cover large and hard to reach areas

Provides up to date and repeatable data non-invasive and cost effective over time

Limitations.

Cloud cover may block satellite view

Expensive equipment and skilled staff needed

may require ground verification for accuracy

Some areas with underwater

are harder to analyze.

Question (3)

Types of vitamins.

Fat-soluble V

fat soluble A, B, E, K
Stored in body fat.

Taken in small amounts.

Water-soluble V

Water-soluble B-complex
and C not stored in the
body need to be taken
daily

Roles in human health

V A Good, eyesight, skin repair

V B (B1-B12) Energy, brain
function, cell health

V C! Boost immunity help in
wound healing

V D Builds strong bones
and teeth

V E Protects skin and
cell from damage.

V K help in blood clotting

for skin hair, eyes

Vit C

keep skin soft
repair damage cells

Vit B (Biotin)

strengthens hair
and nails

Vit E

Promotes glowing skin
and hair growth

Vit A

help maintain sharp
eyesight

Deficiency

Vit A

Night blindness, dry

Vit C

skin

Vit B

fatigue, memory problems

Vit E

Bleeding gums, weak
immunity

Vit D

Bone pain, rickets

Vit E

weak muscles

skin problems

Question (4)

What is polio?

Polio is viral disease that
attacks the nervous system
It mainly affects children
under 5 years old and
can cause permanent paralysis

Or over death

Transmission

Spread through contact with stool or saliva of an infected person, mostly spreads in areas with poor sanitation and dirty water

Global Eradication Efforts

World health organizations who members started Global Polio Eradication initiative in 1988

Vaccination campaigns in over 120 countries reduced Polio over 99%

Challenges: faced

mass misinformation and vaccine refusal in some communities
political instability and war zones

Remote or hard to reach areas

Low routine immunization coverage

Importance of vaccination

it is only the way to prevent polio.

Polio has no cure, only prevention.

if vaccination stops, polio can return and spread, which leads immunity protects entire communities.

Section II

Question 1

Let:

- 1) Cost Price = Rs 100
selling Price = Rs x
profit = $x - 100$

If selling Price doubled ($2x$) then profit becomes 3 times the original profit.

So

$$2x - 100 = 3(x - 100)$$

$$2x - 100 = 3x - 300 = 3x - 2x =$$

$$300 - 100 \Rightarrow x = 200$$

original SP = 200

Profit = 200 - 100 = Rs 100

Profit % = $\frac{\text{Profit}}{\text{Cost Price}}$

= $\frac{100}{100} \times 100 = 100\%$

Answer = 100% Profits

Question (2)

2) Let y's Pay = Rs. x
Then x gets = 120% of x =
 $\frac{120}{100} = 1.2x$

$x + 1.2x = 550 \Rightarrow 2.2x = 550$

$x = \frac{550}{2.2} = 250$

Question (3)

3) Let breadth = b , then Perimeter
= $5b$

Perimeter of rectangle = $2(l + b) = 5b$

$2(l + b) = 5b \Rightarrow l + b = \frac{5b}{2}$

$l = \frac{5b}{2} - b = \frac{3b}{2}$

Now Area = $l \times b = 216$

$\frac{3b}{2} \times b = 216 \Rightarrow \frac{3b}{2} = \frac{216}{b} \Rightarrow b^2 = 144$

$$= \frac{216}{3} = 144 \Rightarrow 6 = 12$$

$$\frac{(3 \times 12)}{2} = 18 \text{ cm length}$$

4) multiples of 3 = 3, 6, 9, 12, 15, 18, $\rightarrow$ 6 numbers

multiples of 5 = 5, 10, 15, 20 = 4 numbers

Common multiple (LCM) = 15 (count once only).

$$6 + 4 - 1 = 9$$

$$\text{Probability} = \frac{9}{20}$$

Question (2)

1) Student of 2 years of age = 48
 student above 8 years = $2 \times 48 = 32$
 student below 8 years = $2 \times 48 = 32$ of
 total student.

Total student Below Exceeding Above 8

$$x = 0.2x + 48 + 32$$

$$x - 0.2x = 80$$

$$0.8x = 80 = x = \frac{80}{0.8} = 100 \text{ student}$$

2) father age $= 2x + 3x = 4x$

After 7 years

father age $4x + 7$

Rashid age $= x + 7$

$4x + 7 = 2.5(x + 7)$

$8x + 16 = 5x + 40$

$8x - 5x = 40 - 16$

$3x = 40 - 16$

$3x = 24 \Rightarrow x = 8$

Rashid current age $= x = 8$

father $4x = 32$

After further 7 years - 16 years

Rashid $= 8 + 16 = 24$

father $= 32 + 16 = 48$

father age $48 = 2 \text{ times}$

Rashid age 24

3) When two dice tossed

Each die has 6 faces

$6 \times 6 = 36$

Prime numbers (2, 3, 5, 7)

2 - (1, 1) 1 way

3 - (1, 2) (2, 1) 2 ways

5 - (1, 4) (2, 3) (3, 2) (4, 1) (4 ways)

7 - (1, 6) (2, 5) (3, 4) (4, 3) (5, 2) (6, 1) 6

$$1 + 2 + 4 + 6 + 2 = 15$$

$$\text{Probably } \frac{15}{3} = 5$$

$$\frac{5}{12} \text{ Answer}$$

4) total age all 11 players = 112

$$\text{Captain} = 26$$

$$\text{wicket keeper} = 1 + 3 = 29$$

$$\text{their combined age} = 26 + 29 = 55$$

$$9 \text{ players total age} = 112 - 55$$

$$\frac{112 - 55}{9} = 21 - 5$$

$$(112 - 55) = 9(21 - 5)$$

$$112 - 55 = 92 - 9$$

$$112 - 92 = 55 - 9$$

$$22 = 46$$

$$22 = 23$$

year average age
term