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! 🌟

(Handwritten notes overlaid:)

GSA Date:_____ Day:_____

SECTION-B

Q6(ii)

The woman is mother of Ahsan

Q 6 B

Area of Rectangular Park

Given
Length : Breadth = 3 : 2

Speed = 12 km/hr

Time = 1½ km/hr

$= \dfrac{1000\ m}{60}$

$= 200\ m/min$

Perimeter = 200 ×

Let $l = 3k$
$w = 2k$

Use 2026

$$1600 = 10x$$

$$x = 160$$

So, length $= 3 \times 160 = 480 \, m$

Breadth $= 2 \times 160 = 320 \, m$

Area $= l \times B$

$$= 480 \times 320$$

$$= 153,600 \, sq.m$$

Q No. 6(c)

Given:

i) Unit digit exceeded by 2

ii) Product of a number and sum of digits $= 144$

Solution

Let tens digit $= x$

Unit digit $= x + 2$

Number $= 10x + (x + 2)$

$$= 11x + 2$$

Sum of digits $= x + (x + 2)$

$$= 2x + 2$$

$(11x+2)(2x+2) = 144$

$(11x+2)(x+1) = 72$

☞ Let $x = 2$

$(22+2)(3) = 24 \times 3 = 72$

Numbers are:

Tens digit = 2

Unit digit = 4

$= 24$

Q NO 6D

Given:

$LCM = 48$

Ratio $= 2:3$

Let numbers be $2x$ and $3x$

LCM of $2x$ and $3x = 6x$

$6x = 48$

$x = 8$

$2x = 16$

$3x = 24$

$16 + 24 = 40$

$\therefore = 40$

QNO 7 (A)

Given

40% of a number $= \dfrac{2}{3}$ of second number

Let, first number x

& second number y

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

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

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

$$3x = 5y$$

Ratio $= 5 :$
$(1^{st} \text{ to } 2^{nd})$

QNO 7 (B)

Given

Selling price of 17
ball $= 720$ Rs
Loss $=$ cost price of 5 balls

Let cost price of one

ball $= x$

Total CP of 17 balls $= 17x$

Loss $=$ CP of 5 balls $= 5x$

$$SP = CP - Loss$$
$$720 = 17x - 5x$$
$$720 = 12x$$
$$x = 60$$

Q NO 7C

Given

i) Man is 24 year older
   than his son

ii) After 2 years, man's
    age $=$ twice the son's age

Let Son's age $= S = x$

Father's age $= F = x + 24$

In 2 years, their ages
will be ;

$$F = x + 24 + 2 = x + 26$$
$$S = x + 2$$
$$= x + 2$$

Now,

$$x + 26 = 2(x \cdot 2)$$

$$x + 26 = 2x + 4$$

$$26 - 4 = 2x - 4$$

$$x = 22$$

Son's age

QNO 7D

Rashid:

32 pages in 6 hours

$$speed = \frac{32}{6} = \frac{16}{3} \ pages/hour$$

Kamran:

40 pages in 5 hours

$$speed = \frac{40}{5} = 8 \ pages/hour$$

Combined speed

$$\frac{16}{3} + 8 = \frac{16 + 24}{3} = \frac{40}{3}$$

$$Time = \frac{11}{40/3} = \frac{110 \times 3}{40}$$

$$= \frac{330}{40} = 8.25 \ hours$$

Time required = 8 hours 15 mins

QNO3 (a)

How Global Warming can be reversed

Global Warming is the phenomenon of gradual increase in Earth's average temperature. It is caused by release of greenhouse gases in atmosphere.
It can be reversed by following way;

i) Reduction of GHG Emission

Global warming can be reduced by reducing the emission of greenhouse gases such as CO_2 and methane. This can be achieved by stopping use of fossil fuels.

b) Renewable Energy

It can be also reduced by using renewable energy such as wind, solar, hydel and geothermal energy etc. Renewable energy is a clean energy and doesn't contribute to greenhouse gases emission into atmosphere.

c) Afforestation & Deforestation

Planting more trees and protecting existing forests play a crucial role in absorbing CO_2 from air. Forests act as natural carbon sink and helps maintain ecological balance.

QNO 3 (b)

Ceramics

Ceramics are inorganic, non-metallic materials made by heating and shaping compounds of metals and non-metals such as oxides, carbides and nitrides, at high temperatures.

Properties of Ceramics

i) Ceramics have high hardness and strength.

ii) They have high melting points.

iii) They are non-corrosion and have strong resistance to heat.

iv) Ceramics have poor electrical and thermal

conductivity

v) They are brittle in nature.

Application of ceramics

Ceramics have wide applications:

i) They are used in making porcelain, crockery, tittes tiles and sanitary-wares

ii) They are used as electrical insulators and used in spark plug.

iii) As they are heat-resistant, they are used in furnaces and brick kilns.

iv) They are used in medical equipments: surgical tools. Also used in dental implants

v) Ceramics are also used as cutting tools and abrasives.

QNO3 (c)

Working of optical fibres and Mobile Phone

Working of Optical Fibres

Optical fibres function on the principle of total internal reflection. They consist of a central core surrounded by cladding having a lower refractive index. When light enters the fibre at a specific angle, it is continuously reflected within a core and travels over long

distance with minimal loss. Optical fibres are widely used in:

i) Telecommunications
ii) Internet transmission
iii) Medical equipment

due to the high speed and efficiency.

Working of Mobile Phone

A mobile phone operates using radio-wave communication. When person speaks into a mobile phone, the sound waves are ~~connected~~ converted into electrical signals and then into digital signals. These signals are transmitted as radio waves to the nearest cell tower, which connects the cell to the in intended receiver through a network. The receiving mobile phone

Convert the radio waves back into sound, allowing communication over long distances.

QNO 3(d)

Food Additives

Definition:

" Food additives are substances added to improve taste, color, texture or shelf life of food. "

Examples:

i) Food coloring in sweets

ii) Flavouring enhancers in snacks

Food Adulteration

Definition:

" Food adulteration is the deliberate mixing of inferior or harmful substances in food items."

Examples:

i) Mixing water in milk
ii) Adding chalk powder to flour.

Food Preservatives

Definition

" Food Preservatives are chemicals used to prevent spoilage caused

by microorganisms. "

Examples:

i) Sodium benzoate in Juices
ii) Salt in Pickles

Food Contamination

Definition

" Food contamination
occurs when food
becomes unsafe
due to the presence
of harmful micro-
organisms, chemicals
or foreign substances. "

Examples:

Bacterial contamination
of food due to improper
storage.

QNO 5 (a)

Disater Risk Management

DRM refer to the systematic process of identifying, analyzing and reducing the risk of caused by natural or man-made disaster. Such as floods earthquakes, cyclone and industrial accidente.

The main objective of DRM is to minimize the loss of life, property damage and environmental degradation through preparedness, mitigation, response and recovery measures.
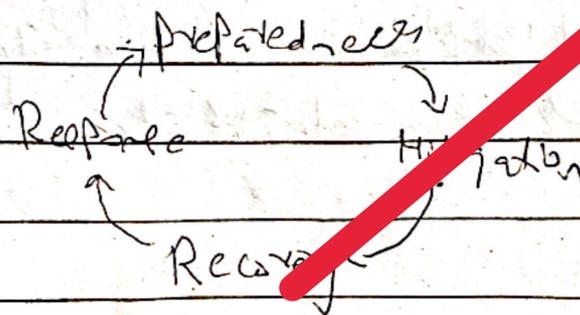
Preparedness
Response
Mitigation
Recovery

Importance of Risk Assessment in DRM

Risk assessment is the crucial component of DRM. It involves identifying potential hazards, assessing vulnerabilities and evaluating the possible impacts of disasters. Through risk assessment, authorities can prioritise high-risk areas and population, plan effective mitigation strategies and allocating resources efficiently. It helps in early warning systems, disaster preparedness and reducing economic losses. Proper risk assessment ensures informed decision-making and strengthen community resilience against disasters.

Q NO 5(b)

Definition of Biofuels

"Biofuell are renewable fuell derived from biological source al plant, agricultural walte, animal fate and organic matter. They are conlidded environment-friendly alternatives to foscil fuels because they reduce greenhoule ~~gas~~ emissions.

Production of Bio-diesel

Biodiesel is produced from vegetables oile or animal fate or dinge through a chemical procell called transelterification. In this

Process, oil reacts with alcohol (usually methanol) is the presence of a catalyst to produce bio-diesel and glycerol as by-product. Bio-diesel can be used in diesel engines either alone or blended with petroleum diesel.

Production of Biogas

Biogas is produced by the anaerobic decomposition of organic waste such as animal dung, kitchen waste, and agricultural residues. Microorganisms break down the waste in the absence of oxygen, producing a mixture of gases mainly consisting of methane and CO_2. Biogas is commonly used for cooking, heating

and electricity generation.

QNO 5 (c)

Digestive System

The digestive system is a group of organs that work together to break down food into simpler substances that can be absorbed and used by the body for energy, growth and repair.

Role of Stomach

Stomach is a muscular organ that stores food temporarily and mixes it with gastric juices containing hydrochloric acid (HCl) and enzymes. These substances help in digestion of Protein

and kill harmful micro-organisms. The stomach churns food into a semi-liquid form called chyme.

Role of Small Intestine

The small intestine is the main site of digestion and absorption. Digestive enzymes from the pancreas and bile from the liver act here to complete the digestion of carbohydrate, protein and fats. The digested nutrients are absorbed through intestinal wall into bloodstream.

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diagram.

4

QNO 5(d)

Plastics

Definition

"Plastics are synthetic or semi-synthetic material made from polymers derived mainly from petroleum."

They are molded into various shapes and various are widely used in daily life.

Properties of Plastics:

Following are the properties of Plastics:

i) They are light weight.

ii) They are durable and long-lasting.

iii) Plastics are corrosion resistent.

iv) They are flexible and can be molded into different forms and shaped.

v) They are good insulators of heat and electricity.

Applications of Plastics

Following are the applications of Plastics:

i) They are used in packaging and household items.

ii) Plastics are used in electrical insulation.

iii) They are used in many medical and surgical equipments.

iv) They are used in construction materials.

v) They are also used in automobile parts.

Environmental Risks associated with Plastics

Plastics are non-biodegradable and accumulate in the environment, causing pollution. They harm wildlife when ingested and contribute to soil and water contamination. Burning plastics releases toxic gases that pose serious health and environmental hazards.