

(4)

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

Date: 03-01-2024

MISBAH FIYAZ (412)

Day: SATURDAY

General Science and Ability

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:

Q.5(A)

Soln:

Let the woman name = x
Granddaughter of x is the only daughter of Ahsan's brother. It means x is the mother of Ahsan.

Wife relation to Ahsan = Mother

Q.6(B)

Soln:

1. 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.

2. Make your answers look scientific, not just theoretical. Use flowcharts and diagrams wherever they add clarity.

3. Neatness matters — keep your handwriting clean, avoid cutting or overwriting.

4. Mind your spelling and grammar — while GSA doesn't deduct marks for these, your expression leaves an impression.

5. In the ability portion, explain analytical ability questions in words. For a 5-mark part, show all steps and provide clear explanations.

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

Distance covered in 8 minutes = $200 \text{ m/min} \times 8 = 1600 \text{ m}$

Perimeter of rectangle = 1600 m

$$2(L+B) = 1600$$

$$2(3x+2x) = 1600$$

$$2(5x) = 1600$$

Ratio between length and breadth of rectangular park = $3:2$

Speed of cycling = 12 km/hr

Man completes one round in time = 8 minutes

Area of the park = ?

Area of rectangle = $l \times w(b)$

$$= 3x \times 2x$$

Let length = x , breadth = y

$$3x = 2y$$

If speed is 12 km , in 1 hour

$$= 12 \text{ km in } 60 \text{ minutes}$$

$$= \frac{12 \times 1000 \text{ m}}{60} = 200 \text{ m}$$

$$= \frac{12000}{60}$$

Date:

Page

$$10x = 1600$$

$$x = 160$$

$$\text{Length} = 3x = 3 \times 160 = 480\text{m}$$

$$\text{Breadth} = 2x = 2 \times 160 = 320\text{m}$$

$$\text{Area} = \text{Length} \times \text{Breadth}$$

$$= 480 \times 320$$

$$= 153600 \text{ sq. m}$$

(c) SOLN:

Let the number = 24

Unit digit = 2

Tens digit = 4 (exceeds by 2)

Product of the given number 24

and sum of digits (6) = 144

$$24 \times 6 = 144$$

So the number is 24

(d) SOLN:-

L.C.M of 2 numbers = 48

let the number = x

Numbers are in the ratio 2:3

$$2x : 3x$$

$$2x : 3x = 2(\) : 3(\)$$

$$\text{L.C.M} = 2 \times 2 \times 2 \times 2 \times 3 = 48$$

If we see in content of

2:3 it is not

Correct:

Lets take 2 more numbers

$$8 \times 2 \times 3 = 48$$

$$2x : 3x$$

$$2(8) : 3(8)$$

$$16 : 24$$

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

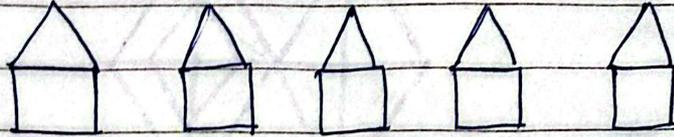
8	16, 24
2	2, 3
3	1, 3
	1, 1

Sum of the number = 16 + 24

Number of items = 40 items

Q No 8:

(A) Soln,

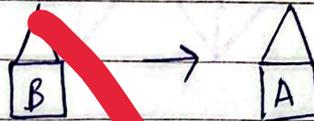


A B C D E

Here are 5 different house

A to E in a row

A is to the right of B



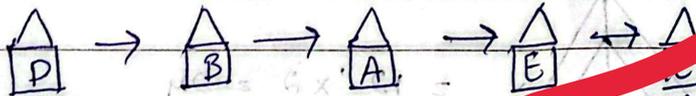
E is to the left of C and right of A



B is to the right of A



If we combine them,



Therefore B, A and E are in the middle;

(C) Soln-

- (a) SHIRT (b) COAT (c) Blouse
- (d) SKIRT (e) Sweater

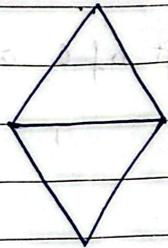
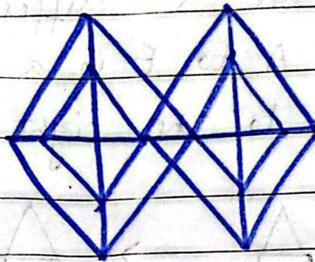
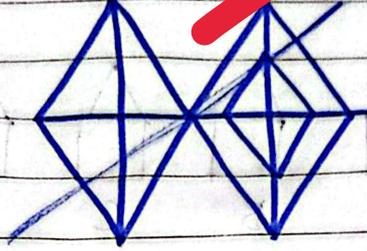
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The odd one is SKIRT

As it is lower-body garment while others are upper-body garments.

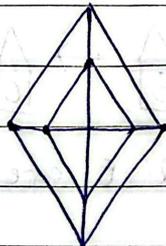
(d) Soln:-



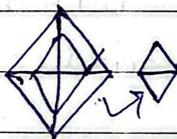
= 2 triangles in both
= 4



= 6 triangles in both
= 12



= 12 x 2 = 24

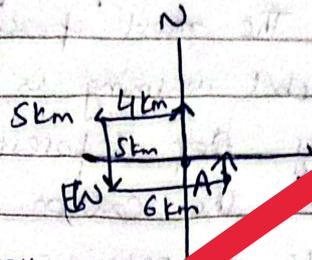


= 24 + 2 = 26

Total triangles = 26 Ans

Q.8(b) Soln:

If one starts running from point A towards north



(a) I am ~~far~~ on 2 km away from where I started.

(b) I was running towards North while finishing.

(c) After taking second turn, I was running towards South.

From the finishing point, if I have to reach starting point, I will have to run in west direction.



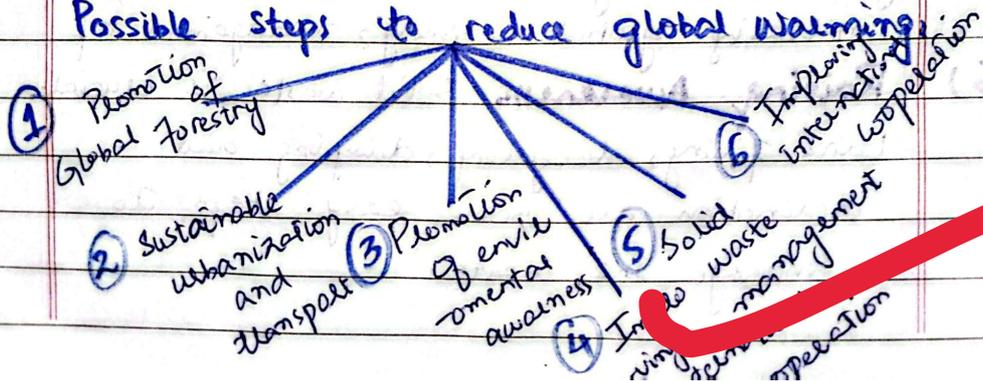
(SECTION - A)

Q.3 How global warming can be reversed?

Ans: Reversal of Global Warming:

Global warming is a universal problem. It is not possible to reverse it completely but it can be minimize by taking some preventive measures, by adaptations and mitigations.

Possible steps to reduce global warming:



(1) Promotion of Global forestry:

The most possible solution to reduce global warming is to grow forests, whether by ~~def~~ reforestation or afforestation. Trees are the carbon sinks to play a vital role in reducing green house gases.

(2) Sustainable urbanisation and transport:

By converting the cities into sponge cities, settling population vertically, reducing private transport and use of bicycles can lower the risk of global warming.

(3) Promotion of environmental awareness:

By promoting environmental awareness through social media, educational institutions, surveys and door to door precautions about climate change and global warming it can be reduced.

(4) Improving international cooperation:

As the developed countries are more involved in emitting green house gases than developing countries, therefore to reduce it economic, social, and environmental cooperation is needed.

(5) Solid waste management

Solid waste is a big cause of global warming. To lower the risk of increasing global warming, management of

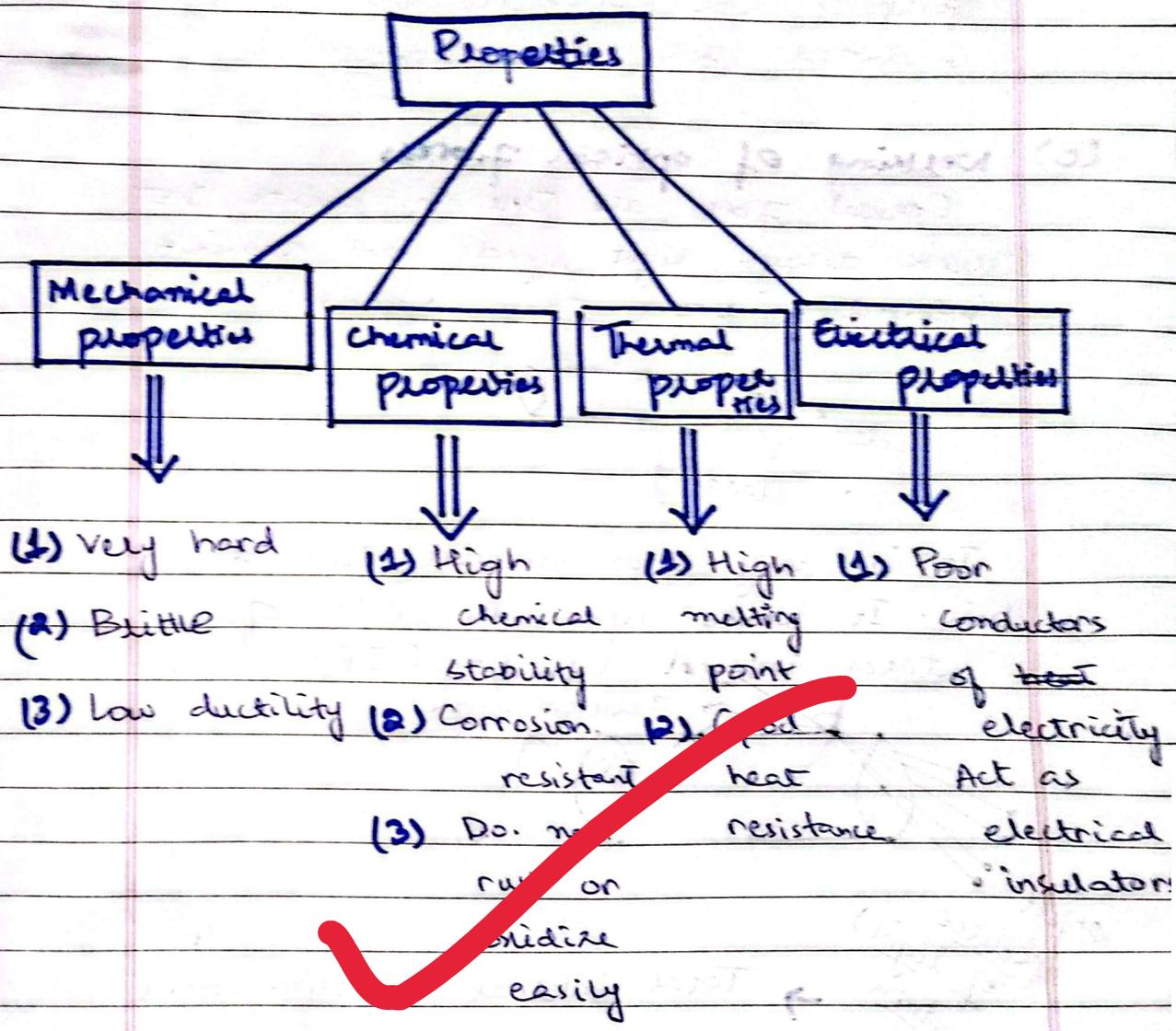
(6) Raising Awareness: Solid waste management

Land filling, recycling, dumping and incineration are some easy steps to manage the waste.

(b) Define ceramics? Give properties and applications of ceramics.

CERAMICS:

Ceramics are non-metallic solids shaped and hardened under very high temperature, usually made of clay, cement or powder.



Applications:

(1) Ceramics are generally used in homes

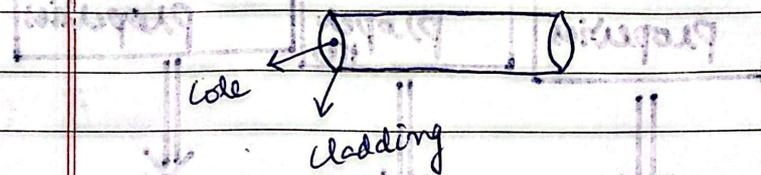
For checking, Ceramics are used in industries for making tiles and marbles, cutting tools and abrasive.

Ceramics are used in medical applications like dental implants or artificial bones or joints.

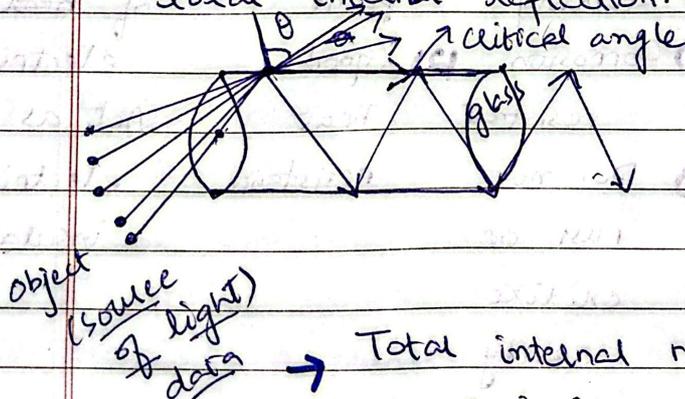
Ceramics are used for electrical purposes like capacitors and as insulators for some purposes.

(c) Working of optical fibres

Optical fibres are the instruments that work through light signals and transmit information through these signals.



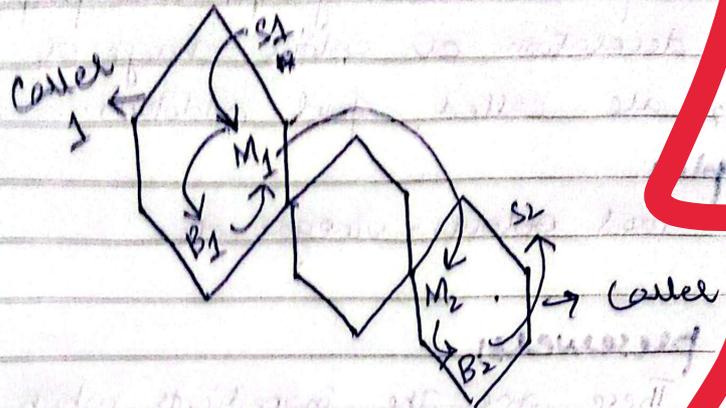
It is a very thin structure like a hair. It works upon the rule of total internal reflection (TIR).



Total internal reflection works when angle of incidence is greater than critical angle. Due to this principle (TIR) light enters the optical fibre, touch the boundaries up and down.

and finally reach the cladding and transmit data outside.

Working of Mobile phones:



Mobile phones work on the principle of electromagnetic waves (radio waves). EM waves do not require medium for their transmission. Radio waves are used due to high wavelength.

When a caller calls, the sound waves enter the mic and the mic converts these waves in electromagnetic waves. These electromagnetic waves transmit to the nearby call towers. They trace the location of the receiver and convert these waves in form of digital waves. Then these waves go to near call station of the receiver and transmit to receiver cell in form of radio waves. Then the speaker of the receiver's phone convert into sound and receiver can hear sound.

(d) Define the following with examples

1) Food Additives:

The ingredients which are added to the foods intentionally for the purpose of decoration or colour change or taste, are called food additives.

Examples:

Food colours, vinegar etc.

2) Food preservatives:

These are the ingredients which are added to food for its preservation from rotting or spoiling.

Examples:

Salt, sugar, some other chemicals

3) Food Adulteration:

Mixing of harmful substances in food deliberately to make food quality low and get high profits.

Examples:

Adding water to milk, chalk to flour, coloring eggs to show it desi.

4) Food Contamination:

Mixing of unwanted or harmful substances unintentionally in food is known as food contamination.

Examples:

Bacteria present in food.