



RHODES HIGH SCHOOL
TECHNOLOGY: Grade 8
JUNE ASSIGNMENT 2020

Total Marks: 100

Name:.....Grade 8:.....

Instructions

- Answer all the questions.
- Write clearly and legibly with a blue / black pen.
- All drawings must be neat, accurate and clear.
- All drawings must be drawn in pencil

SECTION A (30)

Question 1 (10)

Different opinions/ options are given as answers for the following questions. Choose the most correct answer. (1x10=10))

1.1 Technology has brought about progress in the field of materials. An advantage of this development is that

- A) Cheap, safe, disposable products are available
- B) Some human-made products are able to conserve natural products
- C) Strong and attractive products are more accessible to more people
- D) Different material with new properties are available to consumers daily

1.2 Important safety features to consider when making a development are:

- A) Use a safety ruler, cutting mat and craft knife
- B) Use a safety ruler, ruler, cutting mat and craft knife
- C) Use a cutting mat, pencil and ruler
- D) Use a magazine, ruler and craft knife

1.3 The function of enhancing a drawing is to:

- A) Make it look more life-like and realistic
- B) Make it look larger
- C) Make it look isometric
- D) View the drawing from all sides

1.4 An example of a specification as included in a design brief:

- A) You have 2 hours to complete the task
- B) The pulley must lift a load of 200g to a height of 2m
- C) Do not waste resources
- D) You may only work in groups of four learners

1.5 Paperboard:

- A) Can be called corrugated cardboard
- B) Is made of recycled board only
- C) Can be recognised by its grey colouring
- D) Gets its strength from fibres that are layered at right angles

1.6 What is the first step of the design process?

- A) Evaluate
- B) Investigate
- C) Communicate
- D) Plan and make

1.7 Which one of the following is a material?

- A) Pliers
- B) Hammer
- C) Rope
- D) Stapler

1.8 A drawing of an object drawn looking directly from above:

- A) Plan view
- B) Front view
- C) Right side view
- D) Left side view

1.9 Choose the most correct combination of statements from the list below. It is important to recycle because

- i) it is a cheap and useful to reuse materials.
- ii) it saves energy and raw material
- iii) it is the right thing to do
- iv) it can generate income and reduce pressure on landfill sites

- A) I and ii
- B) I, ii and iii
- C) Iii and iv
- D) All of the above

1.10. occurs when wood twists out of shape, causing the product to bend.

- A) Warp
- B) Grain
- C) Stiffness
- D) Rust

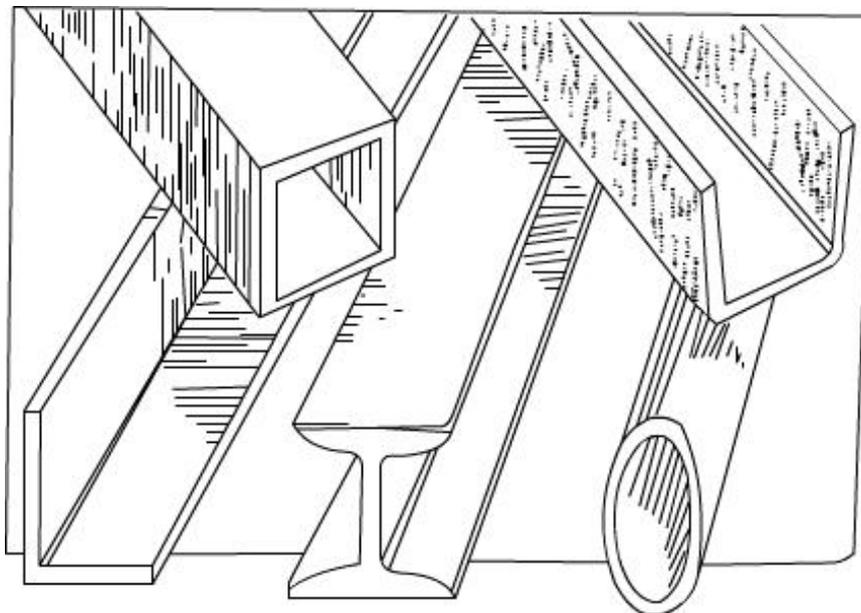
Question Two (5)

Relate the correct explanation from Column B with the forces in Column A. Write down the correct letter from column B in the space provided. (5)

Column A	Column B	Answer: Letter from Column B
1. Torsion	a) Created when two opposite forces act across a material and one part of the structure is forced to slide over the other	
2. Compression	b) A twisting or turning force	
3. Shearing	c) A pulling force involving the stretching of an object	
4. Bending	d) A squeezing or squashing force	
5. Tensile	e) To cause an object to break by applying a force. This force can be tension, torsion or compression	

Question 3 (5)

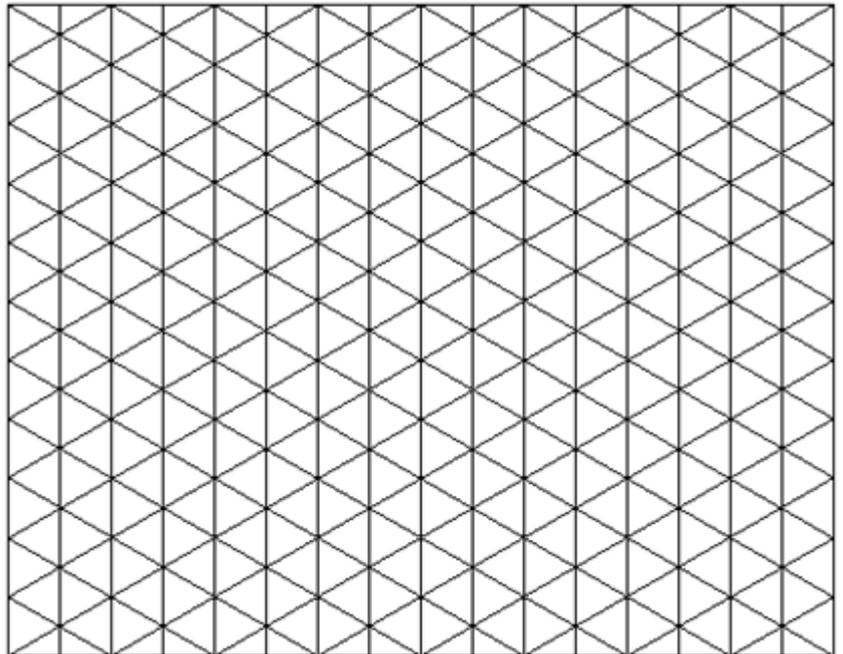
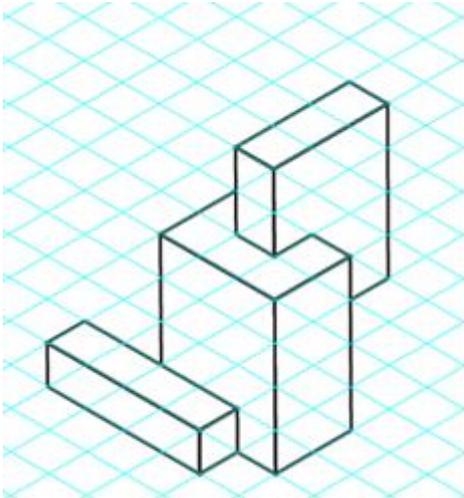
Identify 5 types of beams in the illustration below. (5)



1.	3.
2.	4.
5.	

Question 4 (5)

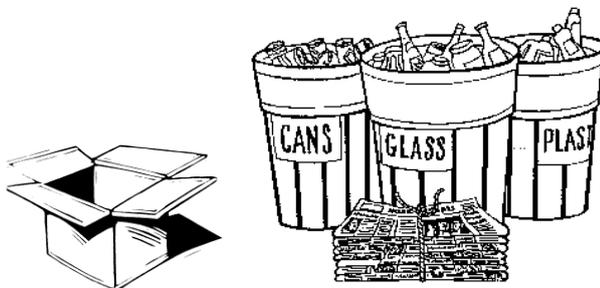
Study the diagram below and redraw it in the isometric grid provided. (5)



RUBRIC: Isometric drawing
 Correct Proportion: 2
 Appropriate scale: 2
 Neat and clear: 1

Question 5 (5)

Refer to the picture below and complete the table. (5)



Packaging			Pollution		
Type	Purpose	Material	Water	Air	Visual
Polystyrene box	Serve burger type foods	polystyrene	√	√	√

Section B (30)

Question 6 (30)

Answer the following questions.

6.1.1 Differentiate between the following terms with an example of each. (6)

Biodegradable (2)	Renewable (2)
Example (1)	Example (1)

6.1.2 Why is a Biodegradable product environmentally friendly? (2)

.....

.....

6.2 Organise the words or phrases in the correct order to describe the paper to paper process. Write down the letter only. (6)

a)De-inking; b)paper from recycling; c)new paper pulp and recycled pulp are mixed; d)paper pulp is made; e)cleaning and bleaching; f)collection of paper

1.	2.	3.	4.	5.	6.
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6.3 Plastic waste can have harmful and disastrous effects on the environment. Do you agree with this statement? Yes or No. Justify your answer. (4x2=8)

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.....

.....

.....

.....

6.4 How will packaging that contains a serving of ready to eat cereals differs from packaging that contains a cheese burger. (4)

Cereal packaging	Cheese burger container

6.5 It is important to select the member for the job it does within a structure. Complete the following factors to consider with the words provided below. The member (4)

design cost weight forces

- a) must be able to resist the that act on the structure
- b) must be the correct for the structure
- c) it must be effective
- d) its appearance must suit the

a)	b)	c)	d)
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Section C (40)

Question 7 (30)

With reference to the scenario below answer the following questions.

Scenario

The environmental club at Rhodes High School developed a project to collect recyclable litter from surrounding community to help with the litter and pollution problems in the Mowbray area.

They have decided to make stationery holders from recycled materials they have collected. These holders will be made from tin cans, plastic bottles, toilet roll and towelling roll. These holders will all be same size and shape (4 -sided shape).

They have asked the Grade 8 Technology learners to design and make the packaging to place the stationery holders in. The packaging must be made from the material collected by the environmental club. The holder must fit into a package that is: 60mm x 40mm x 20mm.

Name the 4 design/ technological process involved in technology. (2)

1.
2.
3.
4.

7.1 List 2 shapes the packaging could possibly be made. (1)

Shapes

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7.2 List 2 materials the packaging could possibly be made of. (1)

Materials

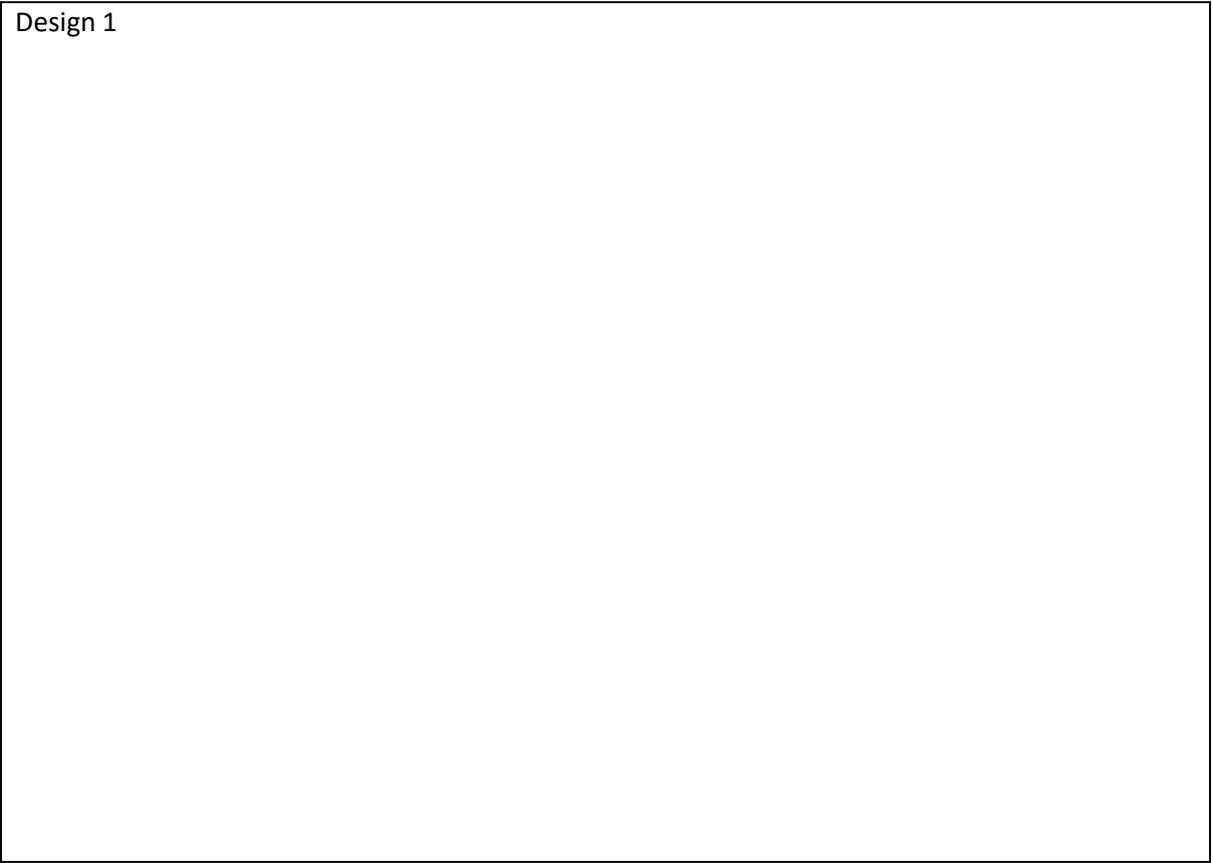
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7.3 Write a design brief for the above scenario. (2)

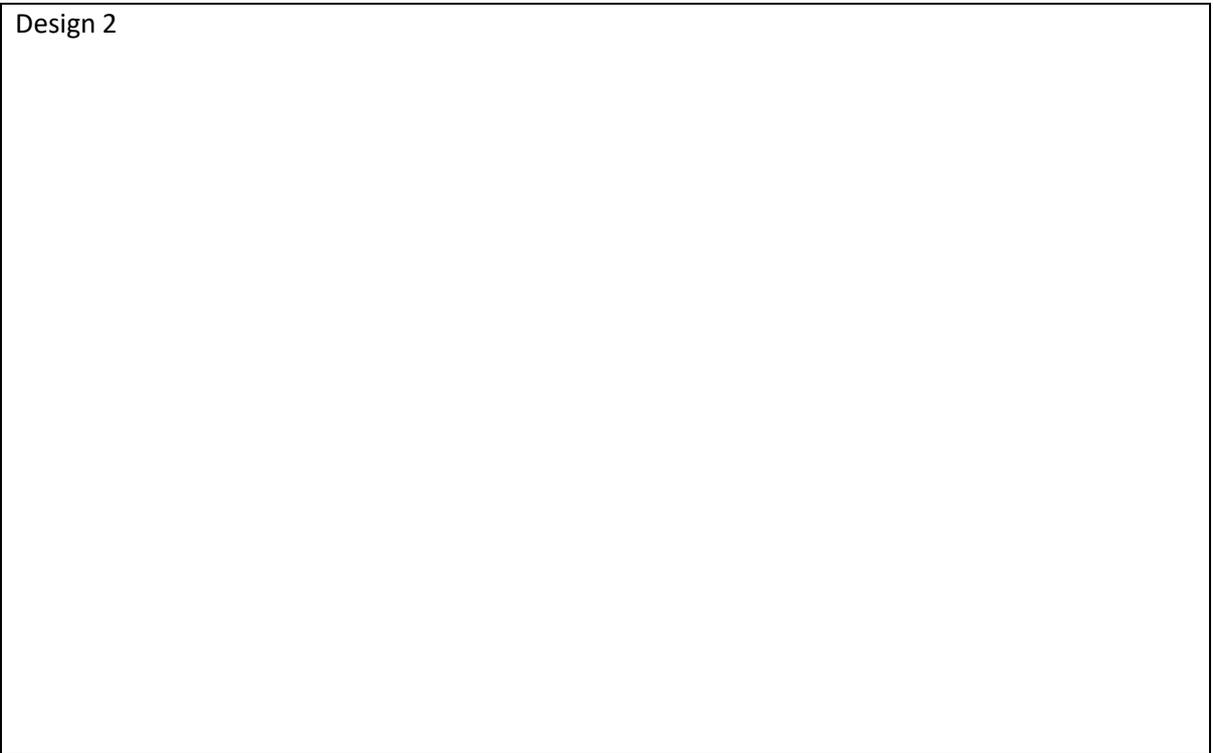
7.4 List two constraints. (2)

7.5 Sketch two rough designs of the packaging (box). (2x2=4)

Design 1

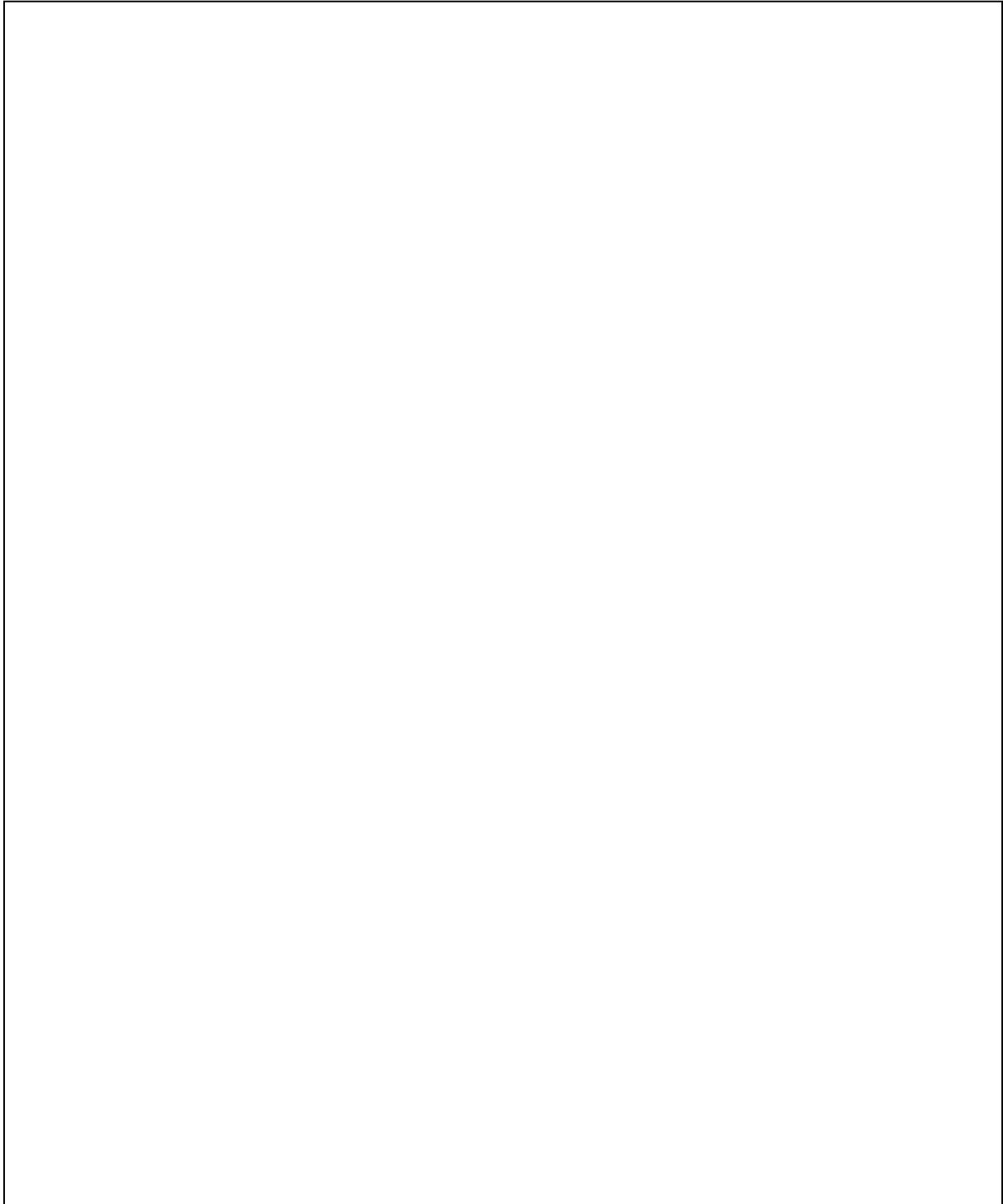


Design 2



7.6 Choose one of your rough designs and draw a neat final design. Provide a 3-dimensional (isometric)view of your design (box). Label your drawing carefully and include the following criteria in your design: (4)

- Colour
- Creative design
- Creative font
- Dimensions



7.7 Explain the term development of a packaging (box). (2)

7.8 Look at your packaging (box) and record the following information. (4)

- a) How many sides does the packaging have?.....
- b) How many edges does the packaging have?.....
- c) How many corners does the packaging have?.....
- d) What is the shape of the box?.....

7.9 Draw a development of your packaging. Label the sides and tabs on the development.
(Measurements: 60mm x 40mm x 20mm) (4)

7.10 Write a step by step making of the packaging, including the materials and tools. (2)

7.11 List 4 safety rules to consider when making the packaging (box). (2)

1.-----

2.-----

3.-----

4.-----

Question 8 (10)

Read the article below and answer the following questions.

Technological Advancements

By Richard Stengel Monday, June 15

At 7:45 A.M. on June 4, Steven Johnson sent a tweet to his more than 500,000 followers on Twitter, informing them that he had written this week's cover story about how Twitter is changing the way society communicates. That tweet is also this week's cover image. I know this is all a bit meta and like trying to capture digital lightning in a jar, but we thought it was a way of illustrating how new platforms and social networks are changing the way we communicate and live.

While I can't write what I want to say about Twitter in only 140 characters (the maximum number you can use in a tweet), there is admirable brevity to tweets that is increasingly rare in our culture. I would argue that Twitter is a uniquely democratic form of communication--that is, it's open to everyone, there is no central authority, and people vote on whom and what they like by signing up to be followers. It's about the wisdom--or folly--of crowds. It's also, as Johnson observes in his superb piece, a

prototype of a new kind of shared national experience: people talking to one another in real time about real events.

Some argue that Twitter is a form of digital narcissism, the toy of the moment for an attention-deficit-disordered culture. But as Johnson notes, the Twitter platform is ultimately about an accretion of tweets, the way hundreds of thousands of pixels form a detailed and complex digital image. Twitter underscores Marshall McLuhan's famous aphorism that the medium is the message--the idea that technological form shapes and determines the culture. McLuhan challenged the traditional notion that content--whether in print, in film or on television--is automatically more significant than the medium through which it is delivered. What we now accept is that the medium changes the nature of what, and how, we communicate. Twitter does that too.

Historically, the most powerful new mediums have changed the way we perceive the world--and how we relate to one another. The telephone, television and Internet have done that in ways we are still processing. But technology itself is neutral. It's a tool, neither good nor evil. It's all in how we use it. Twitter itself may continue to rise or it may go away, but its characteristics--real-time conversation, instant links, and groups of followers--will affect the platforms that come after. There's a lesson in that for all of us in the media, for we must adapt to new technology, and not simply by putting the same old wine in new bottles. We need to adapt by creating our content in a way that is organic to those new mediums. TIME was on to this idea when we made user-generated content (that is, You) the Person of the Year in 2006, and we have continued to monitor how individuals are changing the media and how we communicate. At the same time, we're focused on bringing you the information you need in new ways that are adapted to new technologies.

TIME Tweets [TIME.com](https://twitter.com/time) has close to 700,000 Twitter followers and sends updates every hour

Richard Stengel, MANAGING EDITOR

7.1. How has Twitter changed the way we communicate with each other? (2)

7.2. In your opinion, in what way is Twitter a bad form of communication? (2)

7.3. What other mediums of technology have changed the way we perceive the world? (2)

7.4. According to the article technology is neutral, meaning it is neither good nor evil. Do you agree with this statement or do you think technology is good or evil? Substantiate your answer. (2)

7.5. Do you think adapting to this new technology is a good idea or is there another option in dealing with new technology? Substantiate your answer. (2)

TOTAL : 100 MARKS