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Design & Technology
Practical Summative Assessment
Term 1 (2019 – 2020)

Grade 8- General



STUDENT NAME:

CLASS:

STUDENT NUMBER:

STUDENT MARKS

Task 1 (Practical)	Task 2 (Theory)
/ 30	/ 20
Practical Summative Assessment Total	
/ 50	

SCENARIO

"We have high hopes for entrepreneurs. Our faith in their creative and innovative ideas is immeasurable. They are the foundation of a leading vibrant society in business, economics, culture and all other fields." Sheikh Mohammed bin Rashid Al Maktoum.



- It is prohibited to photocopy or circulate the exam paper before / during and after the exam through e-mail, social media or any other means, and whoever violates this will be subject to the followed legal proceedings
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Entrepreneurship is the process of designing, launching and running a new business. UAE leadership aims to support and promote entrepreneurship among Emiratis.

You have started your own small business which is making and selling unique and creative phone case designs.

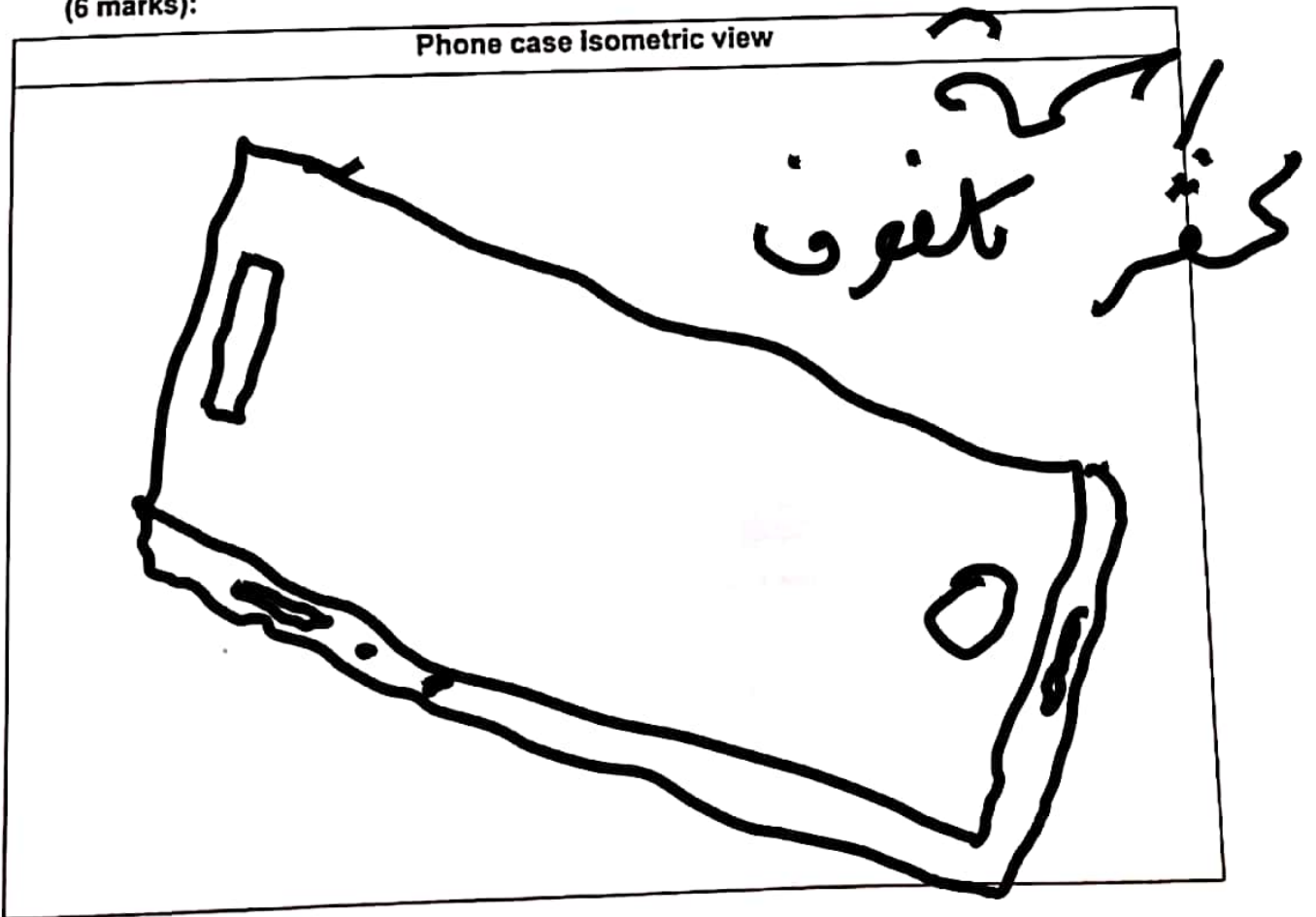
Your first project is to make a personalised cover for yourself. It should have your name written on it. Use 3D modelling tool to create the new design.

Task 1 – Perform the following:

You are required to design a phone case. Your design should:

- Have these dimensions:
 - Length: 145.6 mm
 - Width: 72.9 mm
 - Depth: 7.7 mm
- Have holes for the camera, charging port and volume buttons.
- Have your name on it to make the phone case personal.
- Be unique and creative.

A. Sketch the isometric view for your phone case design showing the 3 dimensions (6 marks):





B. Sketch the front and the top views of your phone case design (10 marks):

Phone case <u>front</u> view	Phone case <u>top</u> view

C. Create the phone case design with the 3D modelling tool. You will have to do the following steps (14 marks):

Steps	Check List
1. Select plane.	<input checked="" type="checkbox"/>
2. Draw a rectangle and change its length to 145.6 mm and its width to 72.9 mm.	<input checked="" type="checkbox"/>
3. Created a depth of 7.7 mm.	<input checked="" type="checkbox"/>
4. Use Shell TCU1 to change the top face thickness to 1 mm.	<input checked="" type="checkbox"/>
5. Sketch the camera hole and extrude it by -1 mm.	<input checked="" type="checkbox"/>
6. Sketch the charging port hole and extrude it by -1 mm.	<input type="checkbox"/>



Task 2: Answer the following:

A. Read the engineering drawing and choose the correct answer (10 marks):

The drawing shows a cylinder with the following dimensions and features:

- Front view: A rectangle with a height of 30 and a width of 40. A dashed vertical line indicates the centerline.
- Top view: Two concentric circles. The outer circle has a diameter of $\phi 40$ and the inner circle has a diameter of $\phi 25.4$.
- Side view: A rectangle with a height of 30 and a width of 40. A dashed horizontal line indicates the centerline.
- A 3D perspective view of the cylinder is shown in blue.

Name	Date	Cylinder		
Drawn	Jamal	21/2018		
Checked	Rashid	5/1/2018		
Approved	Hamda	22/2018		
Third Angle Projection		Sheet	DWG NO	Rev
		A4	4	2
		Scale:	weight	1 of 1
		1:1	500 g	

1. The scale used is _____.

- a) 1:1
- b) 2:1
- c) 1:2

2. The weight of the design is _____.

- a) 450g
- b) 500g
- c) 4g

3. The drawn part is a _____.

- a) rectangle
- b) square
- c) cylinder





4. The value of x on the drawing is _____.

- a) 40
- b) 20
- c) 10

5. What is the drawing number?

- a) 1
- b) 4
- c) 2

6. Based on the drawing scale. The object drawn is _____.

- a) to its true size
- b) reduced in size
- c) enlarged in size

7. What is the revision number of the drawing?

- a) 4
- b) 2
- c) 1

8. What is the depth of the hole?

- a) 25.4
- b) 40
- c) 10

9. The drawing was checked by _____.

- a) Hamda
- b) Rashid
- c) Ahmad

10. The size of the paper used is _____.

- a) A4
- b) A5
- c) A1



B. Evaluate the lamp design by using the SWOT analysis (10 marks):

1. Who would use this product (Write at least two)?

- student
- scientist

2. Mention one strength in the design:

- flexibility

Why is it a strength?

- it can be bent easily.

3. Mention one weakness in the design?

- heavy weight.

Why is it a weakness?

- hard to carry it.

4. Mention one threat to the design:

- hard to make the curved parts

Why is it a threat?

5. How can you improve this design (Write at least two)?

- make it lighter
- select cheap materials

it requires special equipments.