OCR
Oxford Cambridge and RSA

GCE

Design and Technology

H404/02: Problem solving in Design Engineering

A Level

Mark Scheme for June 2022

OCR (Oxford Cambridge and RSA) is a leading UK awarding body, providing a wide range of qualifications to meet the needs of candidates of all ages and abilities. OCR qualifications include AS/A Levels, Diplomas, GCSEs, Cambridge Nationals, Cambridge Technicals, Functional Skills, Key Skills, Entry Level qualifications, NVQs and vocational qualifications in areas such as IT, business, languages, teaching/training, administration and secretarial skills.

It is also responsible for developing new specifications to meet national requirements and the needs of students and teachers. OCR is a not-for-profit organisation; any surplus made is invested back into the establishment to help towards the development of qualifications and support, which keep pace with the changing needs of today's society.

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

MARKING INSTRUCTIONS

PREPARATION FOR MARKING
RM ASSESSOR

1. Make sure that you have accessed and completed the relevant training packages for on-screen marking: RM A*ssessor Online Training*; *OCR Essential Guide to Marking*.

2. Make sure that you have read and understood the mark scheme and the question paper for this unit. These are posted on the RM Cambridge Assessment Support Portal http://www.rm.com/support/ca

3. Log-in to RM Assessor and mark the **required number** of practice responses ("scripts") and the **number of required** standardisation responses.

YOU MUST MARK 10 PRACTICE AND 10 STANDARDISATION RESPONSES BEFORE YOU CAN BE APPROVED TO MARK LIVE SCRIPTS.

MARKING

1. Mark strictly to the mark scheme.

2. Marks awarded must relate directly to the marking criteria.

3. The schedule of dates is very important. It is essential that you meet the RM Assessor 50% and 100% (traditional 40% Batch 1 and 100% Batch 2) deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.

4. If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone or the RM Assessor messaging system, or by email.

5. **Crossed Out Responses**
   Where a candidate has crossed out a response and provided a clear alternative then the crossed out response is not marked. Where no alternative response has been provided, examiners may give candidates the benefit of the doubt and mark the crossed out response where legible.

   Rubric Error Responses – Optional Questions

Where candidates have a choice of question across a whole paper or a whole section and have provided more answers than required, then all responses are marked and the highest mark allowable within the rubric is given. Enter a mark for each question answered into RM assessor, which will select the highest mark from those awarded. *(The underlying assumption is that the candidate has penalised themselves by attempting more questions than necessary in the time allowed.)*

Multiple Choice Question Responses
When a multiple choice question has only a single, correct response and a candidate provides two responses (even if one of these responses is correct), then no mark should be awarded (as it is not possible to determine which was the first response selected by the candidate).

Contradictory Responses
When a candidate provides contradictory responses, then no mark should be awarded, even if one of the answers is correct.

Short Answer Questions (requiring only a list by way of a response, usually worth only **one mark per response**)
Where candidates are required to provide a set number of short answer responses then only the set number of responses should be marked. The response space should be marked from left to right on each line and then line by line until the required number of responses have been considered. The remaining responses should not then be marked. Examiners will have to apply judgement as to whether a 'second response' on a line is a development of the 'first response', rather than a separate, discrete response. *(The underlying assumption is that the candidate is attempting to hedge their bets and therefore getting undue benefit rather than engaging with the question and giving the most relevant/correct responses.)*

Short Answer Questions (requiring a more developed response, worth **two or more marks**)
If the candidates are required to provide a description of, say, three items or factors and four items or factors are provided, then mark on a similar basis – that is downwards (as it is unlikely in this situation that a candidate will provide more than one response in each section of the response space.)

Longer Answer Questions (requiring a developed response)
Where candidates have provided two (or more) responses to a medium or high tariff question which only required a single (developed) response and not crossed out the first response, then only the first response should be marked. Examiners will need to apply professional judgement as to whether the second (or a subsequent) response is a 'new start' or simply a poorly expressed continuation of the first response.

6. Always check the pages (and additional objects if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there then add a tick to confirm that the work has been seen.

7. Award No Response (NR) if:
   - there is nothing written in the answer space.

   Award Zero '0' if:
   - anything is written in the answer space and is not worthy of credit (this includes text and symbols).

   Team Leaders must confirm the correct use of the NR button with their markers before live marking commences and should check this when reviewing scripts.

8. The RM Assessor **comments box** is used by your team leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**
   If you have any questions or comments for your team leader, use the phone, the RM Assessor messaging system, or e-mail.

9. *Assistant Examiners will send a brief report on the performance of candidates to their Team Leader (Supervisor) via email by the end of the marking period. The report should contain notes on particular strengths displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.*

10. For answers marked by levels of response:
    a. **To determine the level** – start at the highest level and work down until you reach the level that matches the answer
    b. **To determine the mark within the level**, consider the following:

Descriptor	Award mark
On the borderline of this level and the one below	At bottom of level
Just enough achievement on balance for this level	Above bottom and either below middle or at middle of level (depending on number of marks available)
Meets the criteria but with some slight inconsistency	Above middle and either below top of level or at middle of level (depending on number of marks available)
Consistently meets the criteria for this level	At top of level

11. **Annotations**

Annotation	Meaning
BP	Blank Page – this annotation must be used on all blank pages within an answer booklet (structured or unstructured) and on each page of an additional object where there is no candidate response.
	Tick
	Cross
CON	Confused (replaces the question mark)
BOD	Benefit of doubt
KU	AO1 – Knowledge and understanding
APP	AO2 – Apply knowledge and understanding
AN	AO3 - Analyse
EVAL	AO4 - Evaluation
^	Omission
NAQ	Not answered question
SEEN	Noted but no credit given
TV	Too vague
OFR	Own figure rule
REP	Repetition

12. Subject Specific Marking Instructions

INTRODUCTION

Your first task as an Examiner is to become thoroughly familiar with the material on which the examination depends. This material includes:

- the specification, especially the assessment objectives
- the question paper
- the mark scheme.

You should ensure that you have copies of these materials.
You should ensure also that you are familiar with the administrative procedures related to the marking process. These are set out in the OCR booklet Instructions for Examiners. If you are examining for the first time, please read carefully Appendix 5 Introduction to Script Marking: Notes for New Examiners.

Please ask for help or guidance whenever you need it. Your first point of contact is your Team Leader.

NOTE – FOR Q 4 it would be good to insert some screen shots that exemplify a top band answer into the MS. Also watch ECR

Question			Answer	Mark	Guidance	
1*			**Indicative content:** Candidates will be expected to refer to the Resource Booklet in their answer **and** demonstrate their understanding of the factors a company would need to consider when looking into developing a Paddle Board. Their answers could include but not be limited to: The **intended user** of the Paddle board: • Recreational user/Beginner. Consideration that the user won't require a high-quality board but will need a low setup cost; perhaps a generic design that will suit many different people. • Intermediate user. Will require some element of 'customisation' to suit the user better. Could be the length of the paddle or the size of the board. • Professional user. Consideration to the material should be mentioned. Lightweight material where cost is less of an importance. Fully customisable for the user's specification. • Organisational use (clubs?). These types of boards will be required to have longevity in their usage. More robust materials used and be able to be used by a wide range of different users. • What **economic considerations** are there with the different potential markets? • Latest trends in the fitness/recreational world. • Amount of disposable cash the users may have. **Where will the Paddle Board be used**? • In local rivers • In lakes • In the sea • What considerations have they considered for each? **Manufacturing:** • Manufacturing cost vs number of sales. • Supply and demand • Design for manufacture • Efficiencies in manufacturing • Lowering costs • Increasing manufacturing speed • Batch production • Bespoke production	14	This question requires an extended response. No credit should be given for bullet pointed responses consisting of a few words or a simple sentences. All responses should be in recognition of the considerations which should be made by the developers of the Paddle Boards. Candidates should be responding with reference to more than one stakeholder involved. Any lifted information can be used in support of the critical examination but no marks should be awarded simply for duplicating text. Credit should be given for responses which identify issues evident in the supplied information and which are then critically analysed and evaluated in terms of their significance to the given scenario and relating to design and technical principles . Credit should not be given if their response does not relate to a consideration.	**Level 4 (12-14 marks)** A **comprehensive** examination of the different factors which a company should consider when looking into developing a Paddle Board. Comprehensive understanding of different user groups and the variations in their needs. Information in RB is used effectively to fully exemplify the points being made which will be supplemented with ow understanding. Well-constructed response in relation to question with a clear and developed narrative that references at least three different considerations in detail along with two different stakeholders. *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Level 3 (9-11 marks)** A **good** examination of the different factors which a company should consider when looking into developing a Paddle Board. Good level of understanding of different user groups and the variations in their needs. Information in RB is used for the most part effectively with some of own understanding to exemplify points being made although one or two opportunities are missed. Well-constructed response in relation to question although one or two opportunities not taken to develop narrative in relation to at least two different considerations in detail along with two different stakeholders. *There is a line of reasoning presented with some structure. The information presented is in the most part relevant and supported by some evidence.* **Level 2 (5-8 marks)** A **sufficient** examination of the different factors which a company should consider when looking into developing a Paddle

			• Reacting to stakeholders' needs and demands • Cost to export • Materials • Environmental issues • Life cycle analysis • Recyclability **Design considerations:** • What will make the SUP stand out in an already crowded market? • Producing a USP for their design. • Trends/graphics/logos • Maintaining the demand over time **Safety considerations:** • User instructions • Training • Product disclaimers • Insurance • Governing body **Associated products:** • Paddles • Buoyancy aids • Wetsuits Award credit for any other valid suggestion.			Board. Sufficient understanding of different user groups and the variations in their needs. Information in RB is used to exemplify some points being made with some of own understanding although much more could have been done to exploit the stimulus material available. Reasonable response in relation to the question although narrative at times lacks depth and cohesion in relation to at least two different considerations in detail along with two different stakeholders. *The information has some relevance and is presented with limited structure. The information is supported by limited evidence.* **Level 1 (1-4 marks)** A **limited** examination of the different factors which a company should consider when looking into developing a Paddle Board. Limited knowledge and next to no understanding of different user groups and the variations in their needs. Use of information from the RB is used in a simplistic way and adds limited value to the points being made. Limited response in relation to question. Narrative is basic and unstructured with reference to one consideration and one stakeholder. *The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.* 0 marks = No response or no response worthy of credit.

2			**Indicative content:**
			
			Candidates will be expected to refer to the Resource Booklet in their answer and demonstrate their understanding of the different features that need to be considered when designing a Paddle for SUP.
			
			Their answers could include but not be limited to:
			
			• The intended application of the Paddle. Where is it going to be used? Sea, rivers, lakes?
			  • Reference to the paddling needing to be modular to allow for ease of transportation. Suggestions for a suitable method of making it modular.
			  • The size of the blade, referencing the application.
			  • The materials which it should be made from.
			
			Paddle blade
			• Understanding of the different materials which it could be made from:
			  • Suitable plastic could be mentioned, as well as; fibreglass, wood, aluminium and carbon fibre.
			  • Reference should be made to their application.
			  • Material properties could be mentioned, about weight, strength or reaction to water.
			• Mention of the different shapes of paddle blade that could be used. Appreciation of how this will affect the stakeholders.
			  • With reference to the application and level of user.
			• Size of the Paddle blade with understanding that the bigger the head the harder it will be to use but giving the advantage of extra speed.
			• Understanding of how the blade is attached to the shaft.
			  • Possible methods of attachment, identifying the need for it to be a modular unit.
			
			Paddle shaft:
			• Understanding of the anthropometric data which should be used when designing the length of the shaft.
			  • Candidate must make reference to the data in the resource booklet, suggesting specific measurements or general measurements that would need to be taken into account.
			• Taking into account the multiple users and some mention of the shaft being adjustable.
				14	*All responses should be in relation to the design of the Paddle which can be seen in three parts – Handle, Paddle Blade and Shaft. Reference to all three parts are required to access the highest level.*
					
					Any lifted information can be used in support of the critical examination but no marks should be awarded simply for duplicating text.
					
					Credit should be given for responses which identify issues evident in the supplied information and which are then critically analysed and evaluated in terms of their significance to the given scenario and relating to design and technical principles
					
					Where applicable candidates may use annotated sketches to support their response.
					
					Candidates who have not referenced the anthropometric data in the RB can only reach Level 2.
						Level 4 (12-14 marks)
						Candidate has a **comprehensive** understanding of the relevant features and pieces of data that would be needed to design an effective SUP paddle for the market. Detailed references have been made to key areas which should have been identified from the RB including reference to three specific parts of a Paddle .
						Sound understanding of anthropometrics has been demonstrated with reference to the possible percentiles. Candidate has also a sound understanding of the wider issues that would need to be considered, from transportation to manufacture and selection of materials.
						
						Level 3 (8-11 marks)
						Candidate has a **good** understanding of the relevant features and pieces of data that would be needed to design an effective SUP paddle for the market. References have been made to key areas which should have been identified from the RB including reference to at least two parts of a Paddle and reference to materials used. Candidates do not have to specifically name these parts but make reference to them in their response.
						Some good understanding of Anthropometrics has been demonstrated with reference to the possible percentiles. Candidate has also a good understanding of the wider issues that would need to be considered, from transportation to manufacture.
						
						Level 2 (4-7 marks)
						Candidate has a **sufficient** understanding of some of the features and pieces of data that would be needed to design an effective SUP paddle for the market. References have been made to key areas which should have been identified from the RB including reference to at least two parts of a Paddle. Candidates do not have to specifically name these parts but make

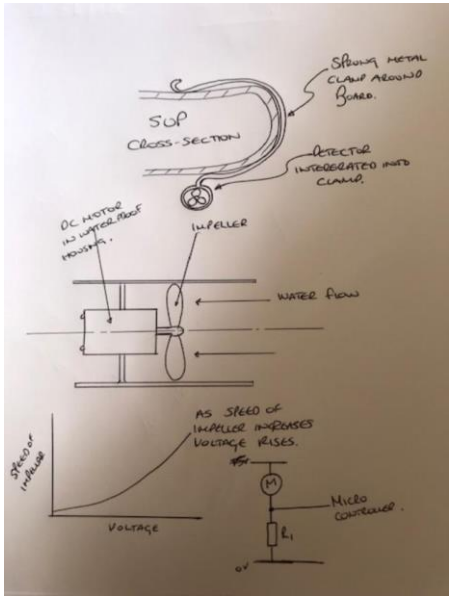
			• Reference to percentiles should be made here and suggestions of the range of length that could be used. • An appreciate of how this will affect the market group should be demonstrated, especially if they are designing a fixed length shaft. • Material of the shaft – aluminium, strong, lightweight, cheaper. Fibreglass – strong, light weight, may fracture easy. Cardon Fibre – very strong and stiff, expensive. **Paddle handle:** • Candidate should have made reference to the ergonomics of the handle and the orientation of the handle to the shaft. • Reference to different users again – children through to adults. • Some reference of disabled users could have been made. • Handle could be user for prolonged periods so will need to be comfortable. • The material of the handle – foam, plastic, wood? • Choice of material should be justified. • A method of attachment to the shaft. **Anthropometrics:** • Reference to gender • Reference to percentiles and explanation of the implication of these in relation to marketability, inclusivity, adjustability • Reference to children and the need to allow for growth **Manufacturing:** • Design for manufacture • Batch production • Repeatability • Accuracy • Reducing costs of manufacture • Skills required • Setup costs • Production timescales • Material availability • Supply and demand • Bespoke manufacture and customising • Reacting to a changing market There should be some mention of the need to making it easy to transport, reference to it being extendable or made up of different parts. Award credit for any other valid suggestion.			reference to them in their response. They may have demonstrated some understanding of Anthropometrics but have not referenced actual data from the RB. Candidate has mentioned some wider issues that would need to be considered, from transportation to manufacture and selection of materials, but the narrative lacks detail. **Level 1 (1-3 marks)** Candidate has a **limited** understanding of some of the features and pieces of data that would be needed to design an effective SUP paddle for the market. Some references have been made to key areas which should have been identified from the RB including reference to at least one aspect of the Paddle. They may have demonstrated some understanding of Anthropometrics but have not referenced actual data from the RB. Candidate has mentioned some wider issues that would need to be considered, for example, manufacture and/or the selection of materials, but the narrative is basic and unstructured. 0 marks = No response or no response worthy of credit.

Question			Answer	Mark	Guidance
3	(a)		Total mass (M) of user = 80+3+12 = 95*kg [1] Weight (W) of paddle board = 95* x 9.81 = 931.95*N [1] Volume of water displaced = B = ρVg V = $\frac{B}{\rho g}$ [1] Calculating the volume of water displaced V = 931.95*/(1025 x 9.81) = 931.95* / 10055.25* = 0.09268292682* = 0.093*m^3 (3 dp) [1] Converting m^3 to litres = 0.093* x 1000 = 93* litres and/or [1] Doubling of total volume. 2 x 93 = 186 litres Identification of SUP from table 1page 5 of resource booklet. SUP 14 [1]	6	Award six marks as follows: 1 mark for calculation of total mass. 1 mark for calculation of weight of paddle board. 1 mark for re-arrangement of formula. 1 mark for calculation of volume of water displaced. 1 mark for conversion of m^3 to litres. I mark for identification of SUP 14. If the correct answer is shown with a clear understanding of the working out to achieve the correct answer then award 6 marks. Where an incorrect answer is given working out should be used to credit appropriate marks. *Allow error carried forward (ECF) where correct working out is shown.

3	**(b)**	**(i)**	Required inflation pressure for SUP-16 board = 0.8 bar Time to fill 100 litre vessel (taken from graph 1) to 0.8 bar = 40*s [1] Time taken to fill SUP-16: Volume of SUP-16 = 250 litres. SUP-16 = 250/100 = 2.5* greater than the 100 litre vessel [1] Time = 2.5* x 40* = 100*s [1]	3	Award three marks as follows: 1 mark for extracting time to fill 100 litre vessel from graph 1 mark for calculating how many times greater than 100 litre vessel SUP-16 is 1 mark for calculating total time to fill SUP-16 If correct answer is given without working out shown award full marks. Where an incorrect answer is given working out should be used to credit appropriate marks. *Allow error carried forward (ECF) where correct working out is shown.
3	**(b)**	**(ii)**	Convert mA to A 10000mA / 1000 = 10A [1] E = V x I x t = 12 x 10 x 100 [1] = 12 000 J [1]	3	Award three marks as follows: Allow ECF from previous question. Candidates can still access full marks with ECF. 1 mark for converting mA to A. 1 mark for extracting figures. 1 mark for calculating total energy in Joules. If correct answer is given without working out shown award full marks. Where an incorrect answer is given working out should be used to credit appropriate marks.

Question			Answer	Mark	Guidance
4			**Indicative content:** **Issue 1** Candidates should design a sensor which can be attached to an inflated SUP, and removed when the SUP is packed away. The sensor should produce an electrical output signal which changes with the speed that the SUP travels through the water. Method 1: Using a DC motor and an impeller to create a varying voltage which could be inputted to the Micro-controller to determine the speed. As a guide: Up to 4 marks awarded to the design of the sensor. Candidates should be seen considering points such as: 1. identifying a suitable component. i.e. Slotted Opto, Reed Switch, DC Motor as a generator, linear potentiometers, Global positioning system etc. 2. conversion of the water movement into a suitable method of detecting/measuring. 3. indication of how the output signal changes with speed. 4. Location of the sensor on the board. Up to 4 marks awarded for the design of the attachment method to the SUP. Candidate could consider points such as: 1. Method of attaching the sensor and display unit to the SUP 2. Clear indication of how it can be detached when not in use 3. Materials that the attachment method uses 4. Method does not damage or interfere with the SUP during attachment or detatching	16	Each solution will reflect a Level 1 to 4. The combination of the two Levels needs to be taken into account when fixing the final mark to be awarded. Candidates may present evidence worthy of marks in various ways, including written notes, annotated sketching and calculations. **Level 4 (13-16 marks)** A **comprehensive** demonstration of technical solutions to overcome the two issues identified. Comprehensive understanding of technical design and technology principles to overcome the two issues identified. Both solutions are well-developed. Information in Resource Booklet is used effectively to fully exemplify the points being made. Sketches if used will be clear and supported with relevant notes. The process will be end to end and clear in the way it is explained. **Level 3 (9-12 marks)** A **good** demonstration of technical solutions to overcome the two issues identified. Good understanding of technical design and technology principles to overcome the two issues identified. Both solutions will be covered but one of the solutions may be underdeveloped. Information in Resource Booklet is used for he most part effectively to exemplify points being made although one of two opportunities are missed. Sketches if used will for the most part be clear and supported with relevant notes although one or two opportunities for clarity may be missed. The process will be end to end and for the most part clear in the way it is explained.

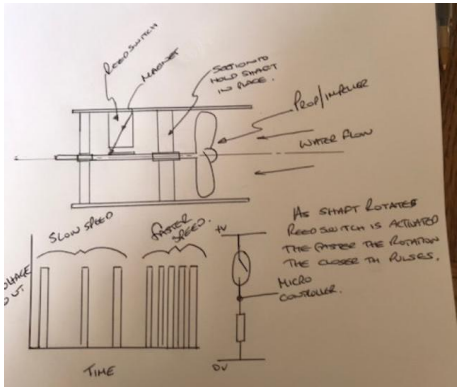
Candidate could have demonstrated how this arrangement would work:



Or

Method 2

Using the water flow to create a pulse which varies as the water flow increases or decreases.



Level 2 (5-8 marks)
A **sufficient** demonstration of technical solutions to overcome the two issues identified.
Sufficient understanding of technical design and technology principles to overcome the two issues identified. Both solutions may be covered but both may be underdeveloped.
Information in Resource Booklet is used to exemplify some points being made although more could have been done to exploit the stimulus material available.
Sketches if used will be adequate and supported with notes, some of which may be relevant.
The process may not necessarily be end to end with some knowledge gaps evident.

Level 1 (1-4 marks)
A **limited** demonstration of technical solutions to overcome the two issues identified.
Limited knowledge and next to no understanding of design and technology principles to overcome either issue identified. Any solution given will be basic.
Use of information from Resource Booklet is used in a simplistic way and adds limited value to the points being made.
Sketches if used will be unclear with only basic notes to accompany them.
The end to end process may not exist and if anything is basic in nature.

0 marks = No response or no response worthy of credit.
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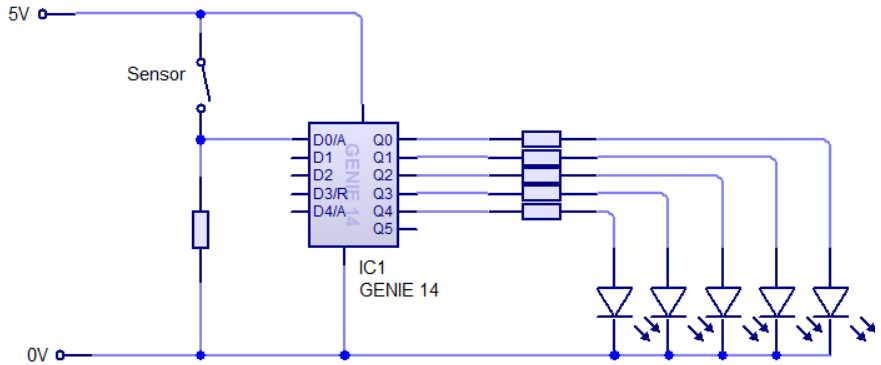
Issue 2:

For the circuit diagram 1 mark should be awarded for each of the following:

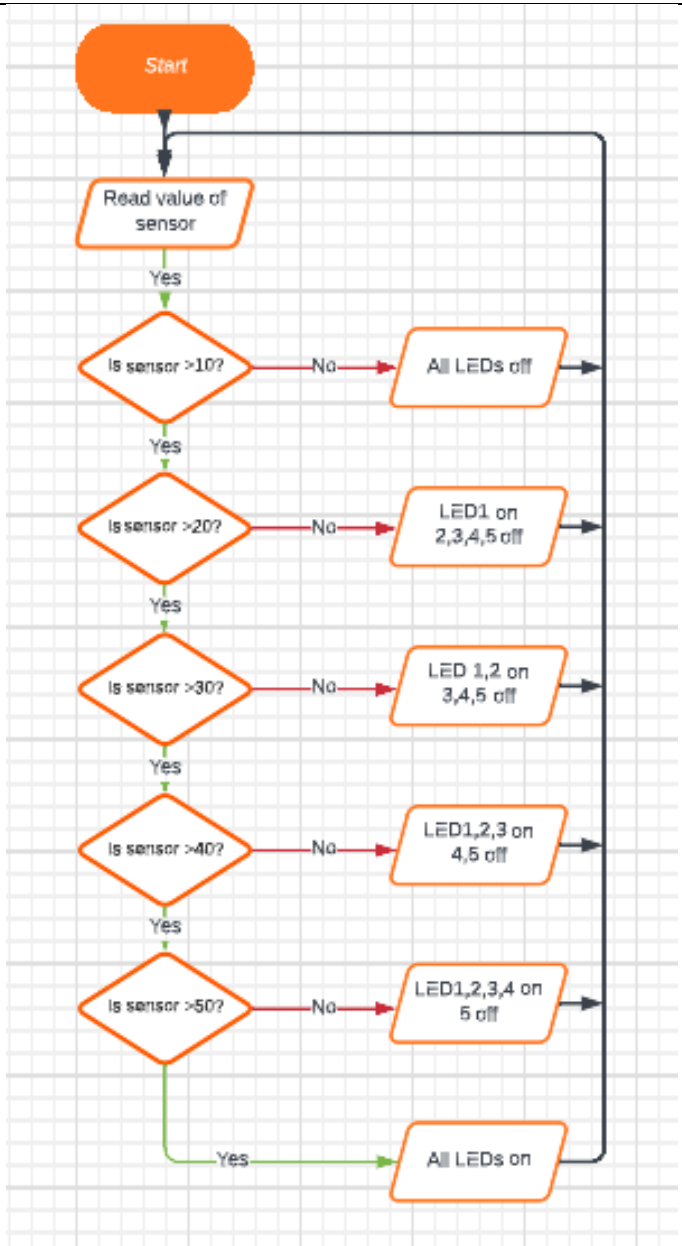
1) Connecting power supply voltage to the microcontroller
2) Indicating how the input sensor is connected to the microcontroller.
3) Showing how five LEDs are connected to five outputs of the microcontroller.
4) Correctly connecting the LEDs (correct polarity) and using protective resistors



Candidate should have produced a flow chart which shows how the microcontroller reads the input signal and lights up more LEDs as speed increases.

Allow up to 1 mark for each of the following

1) Read the input from the input device
2) Compare the input to a set variable
3) Activate the correct output for that variable
4) Turn off the outputs when the speed decreases


Start
Read value of sensor
Yes
Is sensor >10?
No
All LEDs off
Yes
Is sensor >20?
No
LED1 on 2,3,4,5 off
Yes
Is sensor >30?
No
LED 1,2 on 3,4,5 off
Yes
Is sensor >40?
No
LED1,2,3 on 4,5 off
Yes
Is sensor >50?
No
LED1,2,3,4 on 5 off
Yes
All LEDs on

Question			Answer	Mark	Guidance	
5*			Within their response, candidates **must** refer to both the example of the SUP Speedometer **and** use examples from their own studies. Reference to the SUP Speedometer can take comments from previous questions or other points in the Resource Booklet, not specifically outlined in the question if it is appropriate to the question. Candidates can refer to any of the following in their response ensuring that they have made direct links to the SUP Speedometer **and** examples from their own studies. **Entrepreneurship:** - Reference to risk taking in hope for profit with the sector - May already have branches in other areas similar to this one (recreational or similar manufacturing) - **Commercial Partnerships:** - Reference to a partnership with another person or company to use their skills or expertise in the field - Sharing the risk - Reducing the risk by using someone who has been in that field before. - **Venture Capitalists:** - Reference to the use of a venture capitalist to fund the project removing some of the risk - Acknowledgment that they will own a percentage of the company. **Crowd Funding:** - Mostly an internet lead system where people can fund a project and receive X in return. - A risk-free way of getting funding for a project. - Funding is usually given by people with similar interests as that of the project, thus creating a market when the project comes up for sale.	14	**Content** Candidates should make direct links to SUP Speedometer in their responses. Candidates that do not make direct reference to the Speedometer will be capped at a level 2 response. Candidates should make links to at least **one** example from their studies where Enterprise has driven its development. Within the answer they should make reference to two ways in which Enterprise could be used. Candidates who make no reference any areas of study in their answer cannot score more than level 2.	**Level of Response** **Level 4 (12-14 marks)** A **comprehensive** understanding of how enterprise could drive the development of both the SUP Speedometer and at least two examples from their own studies. Well-constructed response in relation to question with a clear and developed narrative that demonstrates a detailed understanding of the impact that enterprise would have with an ability to mention specific types which would be appropriate to the products highlighted. *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Level 3 (9-11 marks)** A **good** understanding of how enterprise could drive the development of both the SUP Speedometer and an at least one example from their own studies. Well-constructed response in relation to question although one or two opportunities not taken to develop narrative in relation to impact that enterprise would have with an ability for the most part to mention specific types which would be appropriate to the products highlighted. *There is a line of reasoning presented with some structure. The information presented is in the most*

			Candidates should make reference to how Enterprise can drive the development of the SUP Speedometer as well as using their own experiences and studies for examples.			*part relevant and supported by some evidence.* **Level 2 (5-8 marks)** A **sufficient** understanding of how enterprise could drive the development of both the SUP Speedometer and at least one example from their own studies. Reasonable response in relation to the question although narrative at times lacks depth and cohesion in relation to impact enterprise would have with an ability to mention specific types which may not always be appropriate to the products highlighted. *The information has some relevance and is presented with limited structure. The information is supported by limited evidence.* **Level 1 (1-4 marks)** A **limited** examination of how enterprise could drive the development of both the SUP Speedometer and/or at least one example from their own studies. Limited knowledge and next to no understanding of impact enterprise would have with any specific types mentioned not appropriate to the products highlighted. *The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.* 0 marks = No response or no response worthy of credit.

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