

Study Guide for 2nd Year Summer Exam 2017

Study Method

Study chapter covered during the year study including chapter on safety (See below)

Study the homework question and any of the correction and pointers given

1. Allow one hour and pick a topic (e.g. Safety P.36 - 42).
2. Read carefully only the pages and pointers shown below in the table and study the diagrams.
3. Ask someone to ask you the questions at the end of the Pointers above chapter.
4. Take note of the questions you do not know.
5. Go back over these areas in the chapter and repeat step 3.
6. Here is a Metalwork book if you do not have one or have mislaid it.

- https://drive.google.com/file/d/0Bwd3Ettj5Y_oVThXWklmbTdRUUU/edit

Topic	Ch.	Page No	Pointers	Homework completed	Done
Metals	2	7-17	The three main furnaces, Ferrous and non - ferrous Metals their Properties.	1-17	
Safety	4	36 - 42	Safety Chapter 4 Study main parts to do with operating machine and general workshop safety	Applicable to subjects below and practical work	
Marking Out And Measuring	5	43-58	Look at the picture and caption below and get to know and use for each tool.	Q1-18, P58-59	
General Bench work	6	61-72	As above and study how to explain methods of filing, cutting out convex/concave profiles, slots	Q1-20 P73-75	
Lathe work	13	141-151	Main parts, techniques used in drilling and machining on the lathe along with safety. Speed calculation p149	Q1-16 P 170-171	
Structures and Mechanisms	15	202-223	Types of motion, Forces, Leavers. Belt, chain and gear Drives, Gear ratio. Cams and application. Application of Ratchets and Pawl. https://www.robives.com/mechs How Four and Two Stroke engines work and their parts? https://www.youtube.com/watch?v=hV3LIImCslpQ https://www.youtube.com/watch?v=Pu7g3uIG6Zo	Q1-36 P223-226	
Drilling	7	78 - 83	Twist drill and their parts, & CSK	1,2,4	
Project	Project Drawing		To be able to describe how to make each part and the measurements. Questions will be based on some parts of the drawing (see drawing below)		

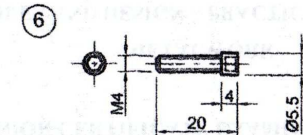
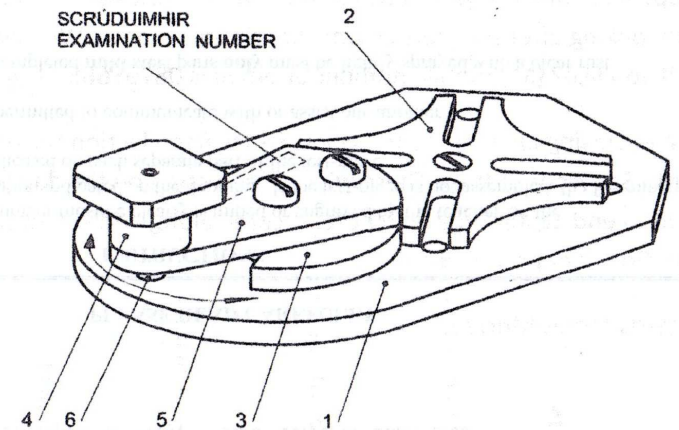
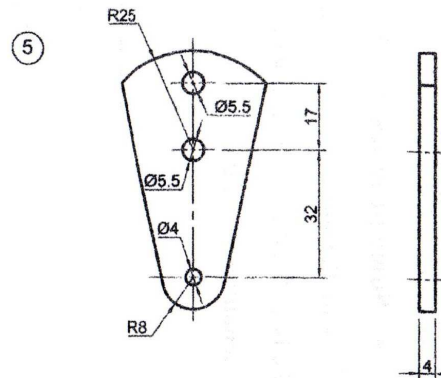
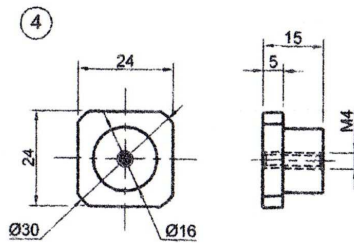
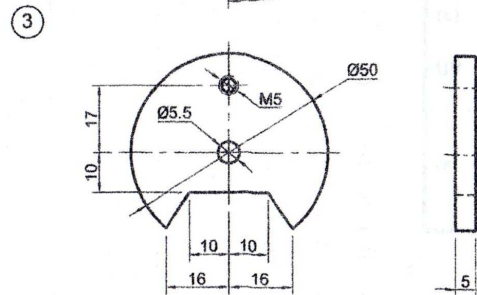
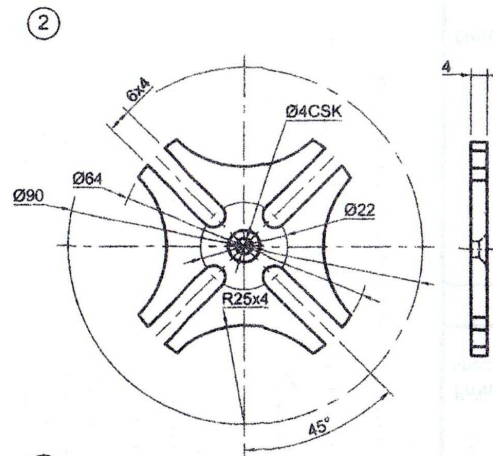
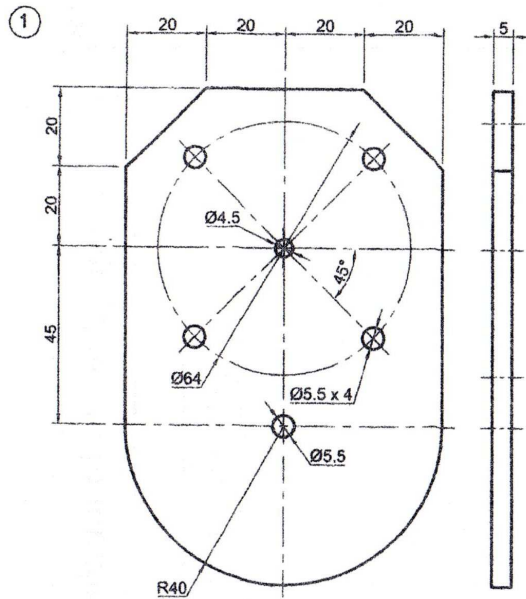
Other site of help are the following:

- <http://technologystudent.com/>
- <http://www.practicalstudent.com/>

Exam. Strategy

- You are required to answer **All question**
- Remember that question 2 will be based on the aspects of the project so you will need to look at drawing of your project for studying and is similar to Christmas exam but on your present project.
- Do a quick read over the paper because some question may give clues or answers to other questions and you may decide some questions to answer now or later.
- Make sure to show all steps in any calculation and formula.
- Your exam is one and half hours on five questions which gives 18 mins per question.
- When completed always read over the paper two to three times carefully to see if:-
 - (i.) You can add any further information to any of your answers.
 - (ii.) Correct any errors.
 - (iii.) To see if you have left any information out.

2nd Year Option A



Tá tábhacht ag baint le cruinneas,
le bailchríoch agus le hoibriú.

Accuracy, finish and function are important.

SONRAÍ CÓIMEÁLA
ASSEMBLY DETAILS

From the materials supplied, make the **Mechanism** shown on the drawing to the shape and dimensions specified.

PART	MATERIAL	PROCESS
1	Coloured Acrylic	Mark out, drill and shape.
3	Coloured Acrylic	Mark out, drill, tap and shape.
4	Aluminium	Mark out, drill, tap and shape.
5	Aluminium	Mark out, drill and shape.

Note: (i)

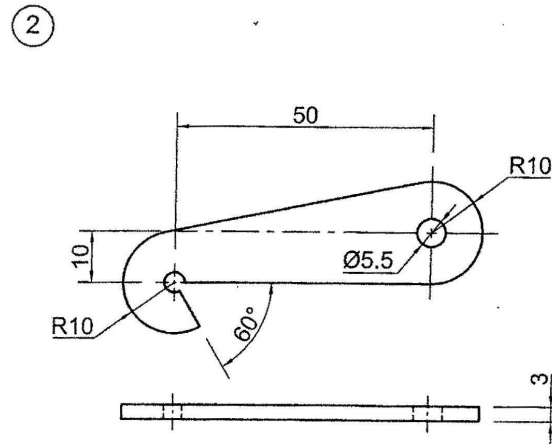
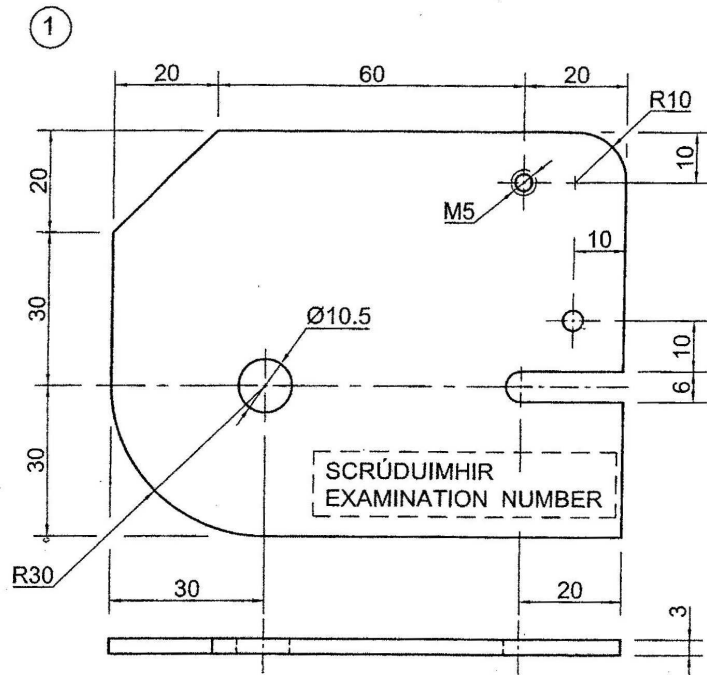
Using the screws and nuts supplied, assemble the Mechanism as detailed on the assembly drawing.

(ii) Accuracy, finish and function are important.

1. Sites connected with some above Mechanism

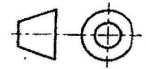
- https://www.youtube.com/watch?v=cunj4O_03e4
- <https://www.robives.com/mechanisms/geneva>

TECHNIQUES AND DESIGN - METALWORK - PRACTICAL - HIGHER LEVEL

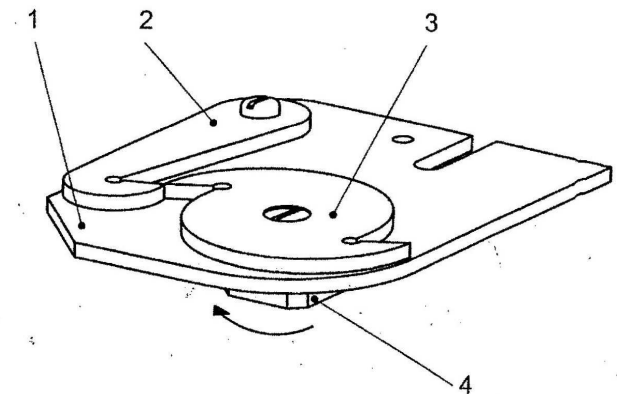
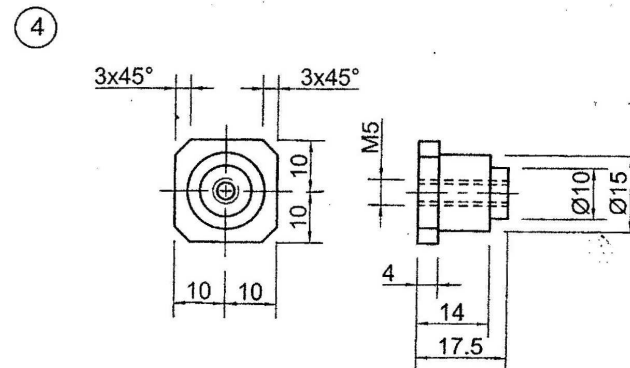
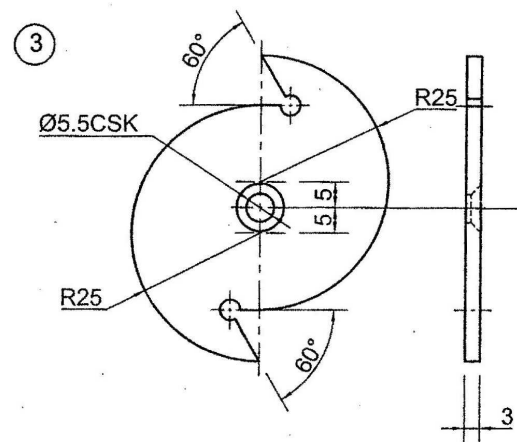


Poill gan toisí
Undimensioned holes Ø4

SCÁLA 1:1
SCALE 1:1



SONRAÍ CÓIMEÁLA
ASSEMBLY DETAILS



From the materials supplied, make the **Mechanism** shown on the drawings to the shape and dimensions specified. Accuracy, finish and function are important.

PART	MATERIAL	PROCESS
1	Aluminium	Mark out, drill, tap and shape
2	Aluminium	Mark out, drill and shape
3	Aluminium	Mark out, drill and shape
4	Aluminium	Mark out, drill, tap and shape

Note: Part 4 Assemble the Mechanism as detailed on assembly drawing, using the screws and nut supplied.