Year 12 / 13 Autumn Exam Revision List

Paper 1 = 2 hours and 30 mins (Technical Principles)

For this paper you must have:

- normal writing and drawing instruments
- a scientific calculator
- a protractor

3.1	Technical principles	Sample A Paper 1
3.1.1	Materials and their applications	Q1, Q4, Q5, Q6, Q10 (Q7, Q8, Q9, Q14)
3.1.2	Performance characteristics of materials	Q1, Q4, Q6, Q8, Q9, Q10, Q12, Q14
3.1.3	Enhancement of materials	Q4, Q14 (Q7, Q10)
3.1.4	Forming, redistribution & addition processes	Q2, Q10. Q14, Q15 (Q1, Q7)
3.1.5	The use of finishes	Q14 (Q1)
3.1.6	Modern industrial and commercial practice	Q11, Q16
3.1.7	Digital design and manufacture	Q13, (Q11)
3.1.8	The requirements for product design and development	Q4, Q14
3.1.9	Health and safety	
3.1.10	Protecting designs and intellectual property	
3.1.11	Design for manufacturing, maintenance, repair and disposal	(Q4, Q8, Q14)
3.1.12	Feasibility studies	
3.1.13	Enterprise and marketing in the development of products	
3.1.14	Design communication	Q3, Q6, Q7, Q10, Q15
3.1.15	Modern manufacturing systems	Q11

- Papers and boards
- Manufactured Boards
- Thermoset polymers
- Tests used on materials – Physical properties
- Laminating and Veneers
- Smart Materials
- Modern materials
- Manufacturing processes surrounding polymers (E.g. Blow moulding)
- Fabrication and finishing process
- Production methods and scales
- General maths

Paper 2 = 1 hour and 30 minutes (Designing & making principles)

For this paper you must have:

- normal writing and drawing instruments
- a scientific calculator

3.2	Designing and making principles	Sample A Paper 2
3.2.1	Design methods and processes	(Q1)
3.2.2	Design theory	Q3
3.2.3	How technology and cultural changes can impact on the work of designers	Q4, Q12
3.2.4	Design processes	Q10
3.2.5	Critical analysis and evaluation	(Q1, Q4, Q5)
3.2.6	Selecting appropriate tools, equipment and processes	Q1, Q2, Q4, Q9, Q10
3.2.7	Accuracy in design and manufacture	Q2, (Q5)
3.2.8	Responsible design	Q6, Q8
3.2.9	Design for manufacture and project management	Q5, (Q2)
3.2.10	National and international standards in product design	Q7

- Developments of products to meet user needs
- Cutting aids
- Design Movements – Bauhaus - Marianne Brandt.
- go no go' gauges
- national and international standards used for quality, safety and disposal
- Environmental Issues - Raw material extraction, manufacturing and ease of recycling
- Modelling materials
- Product Life cycle
- General maths