Candidates answer on the pre-printed A3 Answer Sheets.

Additional Materials: Standard drawing equipment and coloured pencils.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces on both printed Answer Sheets.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, glue or correction fluid.
DO NOT WRITE IN ANY BARCODES.

Answer one question.
Write/draw your answers in the spaces provided on the Answer Sheets.
You may use a calculator.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.
The total of the marks for this paper is 50.
Answer one question only on the pre-printed A3 Answer Sheets provided.

1 Young babies have to learn to walk.

Design a device that will help to support a baby while learning to walk.

(a) List four additional points about the function of such a device that you consider to be important. [4]

(b) Use sketches and notes to show two different methods that could be used to attach wheels to a frame. [4]

(c) Develop and sketch three ideas for the device. [12]

(d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]

(e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and important dimensions. [12]

(f) Suggest two suitable specific materials for your solution and give reasons for your choice. [4]

(g) Outline a method used to manufacture one part of your solution. [6]
Design a package for two dolls. Your design must allow the dolls to be visible within the packaging.

(a) List four additional points about the function of such a package that you consider to be important. [4]

(b) Use sketches and notes to show two different methods that could be used to provide a carrying handle for such a package. [4]

(c) Develop and sketch three ideas for the package. [12]

(d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]

(e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and important dimensions. [12]

(f) Suggest two suitable specific materials for your solution and give reasons for your choice. [4]

(g) Outline a method used to manufacture one part of your solution. [6]
Design a sit-on toy that can be propelled and steered by a child.

(a) List four additional points about the function of such a sit-on toy that you consider to be important. [4]

(b) Use sketches and notes to show two different mechanisms by which a sit-on toy could be propelled. [4]

(c) Develop and sketch three ideas for the sit-on toy. [12]

(d) Evaluate your ideas and justify why you have chosen one idea to develop more fully. [8]

(e) Draw, using a method of your own choice, a full solution to the problem. Include construction details and important dimensions. [12]

(f) Suggest two suitable specific materials for your solution and give reasons for your choice. [4]

(g) Outline a method used to manufacture one part of your solution. [6]