

FD2 – Preparation of Specifications for United Kingdom Patents

FINAL Mark Scheme 2017

Answer
Introduction and Description

Title	1 mark
Statement of field	1 mark
Prior Art	2 mark

Statement of invention and general description
- express statement of what feature of each claim does and corresponding advantage, (Note: the main independent method claim needs a good statement of invention to support its novelty).
For example:

Carrier layer is paper: what it does = base on which laminate is built [$\frac{1}{2}$ mark]; advantage = easily peeled/removed from varnish and then recycled [$\frac{1}{2}$ mark]

Pressure in the range of 69-345 kPa: what it does = makes sure everything is stuck properly [$\frac{1}{2}$ mark]; advantage = part of standard thermal transfer settings in a commercial industrial printing press [$\frac{1}{2}$ mark].

26 marks

Figures:

i) Page numbering	1 mark
ii) Feature numbering	1 mark
iii) Figure description (including reference to non-limiting examples)	2 marks

Specific description:

- features of layers of laminate, description of figures with reference to one embodiment [**~11 marks**]; how laminate is made and applied [**~11 marks**];

22 marks

TOTAL: 56 marks

Claims

Independent claims	32 marks
Dependent claims	28 marks

TOTAL: 60 marks

Abstract

Title (same as title at top of script)

½ mark

Figure to accompany abstract

½ mark

Text

- must state: technical field or main use [**½ mark**], product and methods [**2 marks**], reference numerals [**½ mark**]

3 marks

TOTAL: 4 marks

GRAND TOTAL: 120 MARKS

Suggested Claims

PRODUCT CLAIMS:

17 marks are available for statement of the following features:

A laminate [**1 mark**]

for protecting/preventing tampering of a substrate/security document [**2 mark**]
comprising:

- a) a carrier sheet; [**1 mark**]
- b) a varnish layer [**1 mark**] adjacent the carrier sheet [**1 mark**]; and
- c) an adhesive [**1 mark**] adjacent the varnish layer [**1 mark**].

[remaining **2 marks** for style/clarity]

Add up to **7 marks**, either in independent claim or high ranking dependent claim, for:

- d1) heat-sensitive adhesive; OR
- d2i) wherein the varnish layer is adapted to be separable from the carrier sheet upon the application of heat, and
- d2ii) wherein the adhesive is adapted to melt upon application of heat.

Correct ordering is essential and is carrier/ varnish/ adhesive, thus acceptable to state that adhesive is noted as being not in contact with the paper or otherwise that they are either side of the varnish (as the adhesive sticks to the substrate and the paper must be removed).

Consider deducting marks cumulatively from the maximum 17 marks for unnecessary restrictions to the claim. Examples:

Catastrophic (0 marks):

- Includes passport or specific substrate

Major (deduct 12 marks):

- Not clear that the adhesive is on the other side of the varnish layer from the carrier layer

Minor (deduct 6 marks)

- One or more additional layers
- Method language (depending on language e.g. "in use")

Minimal (deduct 1 mark each):

- Any further dependent claims from below

Other restrictions to be agreed and documented here.

The maximum deduction is 17 marks.

Total: 17 marks

Dependent claims:

To a maximum of **17 marks**.

- e) security indicia on varnish layer [**1 mark**]
- f) varnish layer is printed with/comprises two or more different types of security feature [**1 mark**]
- g) there are two or more varnish layers [**1 mark**]
 - h) the varnish layer comprises visible security features [**1 mark**]
 - i) at least one other varnish layer comprises invisible security features [**1 mark**]
 - j) each layer of varnish is up to a maximum of 3 µm [**1 mark**]
 - k) total varnish layer is a maximum of 12 µm [**1 mark**] (*make sure dependency is correct*);
- l) the varnish is an acrylic copolymer [**1 mark**]
- m) security indicia on adhesive layer [**1 mark**]
Dependent on this are:
 - n) the security indicia is a mirror image [**1 mark**]
 - o) the security indicia comprises a photo image [**1 mark**]
 - p) the security indicia comprises personal data other than a photo image [**1 mark**]
 - q) the security indicia wholly or partially in colour [**1 mark**]
- carrier sheet comprises paper [**1 mark**]
- carrier sheet comprises matt finished paper [**1 mark**]
- the temperature sensitive adhesive has a melting point over 120 DEG C [**1 mark**]
- the temperature sensitive adhesive comprises a temperature sensitive polyurethane [**1 mark**]

Full mark is only awarded for dependent claims if the dependency is correct (*½ mark for dependency, ½ mark for feature*).

NB no basis for a passport or ID card comprising the transfer sheet, because it includes a paper carrier sheet

No marks allocated for claims to:

- weight of paper
- “invisible” inks
- method features e.g. printing methods

Total: 17 marks

METHOD CLAIMS:

A)

11 marks are available for statement of the following features:

Method for protecting/preventing tampering of a substrate/security document [**2 marks**], the method comprising:

- r) positioning a laminate [**1 mark**] according to any one of [product claims]/[specific layers of laminate matching independent laminate claim] [**2 marks**] on a substrate [**1 mark**];
- s) applying heat [**1 mark**] to melt the adhesive layer [**2 marks**] and release the varnish from the carrier sheet [**2 marks**].

NB candidates are likely to use “thermal transfer” and, providing the language is appropriate, this wording is acceptable.

Consider deducting marks cumulatively from the maximum 10 marks for unnecessary restrictions to the claim. Examples:

Catastrophic (0 marks)

- Not defining the laminate correctly

Major (deduct 8 marks):

- Specific temperature and/or pressure range

Minor (deduct 1 marks each):

- Any further dependent claims from below

Other restrictions to be agreed and documented here.

The maximum deduction is 11 marks.

Total: 11 marks

Dependent claims

To a maximum of **7 marks**.

- t) the application of heat is carried out at a temperature in the range of 120-140 DEG C [**1 mark**]
- u) method further includes the application of pressure to the laminate in the range of 69 kPa-345 kPa [**2 marks**; *deduct ½ mark for use of non-SI units*] for up to 10 seconds [**1 mark**]
- v) wherein the substrate is (a security document) a passport, a driving licence, an ID card [**3 marks**]

Total: 7 marks

B)

Method of making/forming a laminate [**1 mark**] for protecting/preventing tampering of a substrate/security document [**1 mark**], the method comprising:

- w) applying a varnish layer to a carrier sheet [**1 mark**]; and
- x) applying a heat-sensitive adhesive layer to the varnish layer [**1 mark**].

Total: 4 marks

Dependent Claims:

- y) varnish layer includes indicia printed by screen-printing [**2 marks**]
- z) adhesive layer includes indicia printed by laser printing [**2 marks**]

Total: 4 marks

No marks awarded for omnibus claims

TOTAL: 60 MARKS