



FACULTY ART DESIGN AND ARCHITECTURE

2015 November

Main Assessment

DEPARTMENT OF INTERIOR DESIGN

<u>MODULE NAME</u>	:	Theory of Materials and Finishes 2
<u>MODULE CODE</u>	:	IDMF1B2/TM211
<u>DATE</u>	:	2 November 2015
<u>DURATION</u>	:	3 Hours
<u>TIME</u>	:	8:30 – 11:30 am
<u>TOTAL MARKS</u>	:	180

<u>ASSESSOR(S)</u>	:	Mr. A. Gill
<u>MODERATOR(S)</u>	:	Ms. G. Di Monte
<u>NUMBER OF PAGES</u>	:	5

INSTRUCTIONS TO CANDIDATES:

ANSWER ANY **SIX** OF THE FOLLOWING EIGHT QUESTIONS
FOR A TOTAL OF 6 X 30 = 180 Marks

- One mark is awarded per correct fact given, you may answer in point form.
- Read the questions carefully and answer only what is asked.
- Use diagrams to illustrate answers.
- Number your answers clearly.
- **Write neatly and legibly.**
- The general University of Johannesburg policies, procedures and rules pertaining to written assessments apply to this assessment.

QUESTION 3

- 3.1 How does the principle of **surface wetting** contribute towards the theory of adhesion? 5
- 3.2 Give one example for each of the following adhesive types.
- 3.2.1 An adhesive that sets from loss of moisture in a solution form. 1
- 3.2.2 An adhesive that sets from loss of moisture in an emulsion form. 1
- 3.2.3 A pressure sensitive adhesive. 1
- 3.2.4 An adhesive that chemically cures as a single component. 1
- 3.2.5 An adhesive that sets through hardening on cooling. 1
- 3.3 Explain the formulation and application of a 'twin-pack' adhesive. 5
- 3.4 Describe the properties of an adhesive that would make it suitable to be used as a mastic and explain why it is used. 6
- 3.5 What is meant by 'gap filling' properties and name two types of adhesives that have these properties? 5
- 3.6 What are the **four** main factors that must be considered when choosing an adhesive for any application. 4
- [30]**
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QUESTION 4

- 4.1. Describe the basic **common** manufacturing processes and materials used to produce all **three** grades of decorative laminates. 10
- 4.2 What are some of the benefits associated with the use of decorative laminates that have made them so suitable for interior design applications? 10
- 4.3 What construction considerations associated with the use of decorative laminates must be considered to prevent moisture penetration into substrates. 6
- 4.4 What is a 'Brown backer' class of laminate and state where and why it is used? 4
- [30]**
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QUESTION 5

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| 5.1 | Describe with the aid of a sketch the basic principle of weaving fabric. | 5 |
| 5.2 | Explain with the aid of a sketch the following yarn types:
SPUN YARN
MOMO-FILAMENT YARN
PLY YARN
BULKED YARN | 8 |
| 5.3 | What benefits can be achieved from blending fibres? | 6 |
| 5.4 | What (SABS) tests are performed in order to determine the durability of a contract fabric? | 7 |
| 5.5 | Compare with the aid of sketches, the effects created by a Dobby weave to that of a Jacquard weave. | 4 |

[30]

QUESTION 6

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| 6.1 | What are the benefits associated with the use of carpeting (resilient flooring) as a floor covering in interiors? | 8 |
| 6.2 | Explain the basic method used for the manufacture of a tufted carpet and describe its resulting appearance. | 7 |
| 6.3 | Name and describe one woven method of carpet manufacture. | 6 |
| 6.4 | Why and when is it necessary to use an underlay? | 5 |
| 6.5 | List four properties of Nylon that make it such a good fibre to use for carpet manufacture. | 4 |

[30]

QUESTION 7

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| 7.1 | Describe how the float glass method of manufacture has improved the properties of architectural glass. | 4 |
| 7.2.1 | List five situations according to SABS building regulations that require the use of safety glazing. | 10 |
| 7.2.2 | Name one glazing product that could be used in the above-mentioned situations, describing its composition and how it performs as a safety glass. | 6 |
| 7.3 | Discuss the advantages that the use of 'Solar Control' glazing can have on the climatic control of the interiors of buildings. | 5 |
| 7.4 | Explain what is meant by the term 'obscure glass', explain how it is manufactured and why it is used. | 5 |
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QUESTION 8

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| 8.1 | In the absence of any definitive definition of a 'green' material, list the criteria that could be used to compare the environment impact of building materials. | 10 |
| 8.2 | Describe how the 'life cycle analysis' can be implemented in order to determine the environmental impact of a building material. | 10 |
| 8.3 | Explain why it is incorrect to assume that all natural materials used for building purposes will have less of an environmental impact than synthetic ones. You may refer to examples to support your answer. | 10 |
| | | [30] |
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THE END