EXAM TITLE:  Finishing, Fitting and Wood Treatment

OPTION:  Construction (CST)

DURATION:  3 hours

INSTRUCTIONS:

The paper contains three (3) Sections:

Section I: Sixteen (16) questions, all **Compulsory**. 55 marks

Section II: Five (5) questions, **Choose any Three (3)**. 30 marks

Section III: Three (3) questions, **Choose any one (1)**. 15 marks
Section A. All the 16 questions are compulsory. 55 marks

01. a) Give a proper definition of the door. 1 mark
     b) Why do we need a door and what are the two main parts of the door? 2 marks

02. a) How can you define a window? 1 mark
     b) Identify four probable functions of the window. 2 marks

03. a) Give with short explanation, three points of good location of the door. 1.5 marks
     b) Also provide with explanation, four points to look at while locating the window. 2 marks

04. a) What do you understand by a paint? 1 mark
     b) List down any four characteristics of an ideal paint. 2 marks

05. Coloring pigments are added to the base to have desired colors of paints. Provide any four divisions of pigments with two examples for each division. 2 marks

06. The desired tint or shade of paint can be obtained by combining coloring pigments. Give at least four tints with two involved pigments for each. 2 marks

07. a) Varnishing is one of the finishing works; how can you define a varnish? 1 mark
     b) Give four purposes of varnishing the wood surface. 2 marks

08. a) Clearly give the meaning of a partition wall. 1 mark
     b) Name and discuss very shortly two main types of partition walls according to load bearing ability. 2 marks

09. Describe at least six requirements to be fulfilled by an efficient partition wall. 3 marks

10. a) Chart out your understanding about the term “House drainage”. 1 mark
     b) List down the main four aims of house drainage. 2 marks

11. a) Describe any five objectives of plastering. 2.5 marks
     b) Identify at least five factors of plaster selection. 2.5 marks

12. Explain cracking and describe five reasons of cracking for a plaster. 2.5 marks

13. a) Explain clearly the difference between the bench work and fitting work. 2 marks
     b) Give any six classes of tools used in fitting workshop. 3 marks
14. a) Discuss three types of micrometers based on where they can be used. 3 marks
   b) The ceiling of a house room is made of various rectangles of plywood. Consider one rectangle touching the wall and name its four visible parts. 2 marks

15. a) Draw a typical ball peen hammer and mention its four parts. 2 marks
   b) Draw a typical standard screw driver and name three main parts. 2 marks

16. a) Identify four main factors to be based on when choosing a good insulating material. 2 marks
   b) It is generally known that low density insulating materials give better thermal insulations than high density materials. Indicate the six properties required for good insulating materials. 3 marks

Section II. Choose and answer any three questions 30 marks

17. a) Draw clearly a typical window and name its fourteen (14) main parts. 7 marks
   b) Some varnishes are good while others are bad. Write down six characteristics of good varnish. 3 marks

18. a) Write down the two famous relationships between Height and Width of doors. 2 marks
   b) As a good technician, give the used standard sizes of door for the following types of buildings:
      i. Doors of residential buildings (External, internal, bathrooms and toilets, garages) 4 marks
      ii. Doors of public buildings (External, internal, bathrooms and toilets, garages) 4 marks

19. a) Name four main types of timber defects. 2 marks
   b) Draw the file used if fitting works and present the main parts of this tool. 4 marks
   c) Explain the cement mortar and the lime cement mortar for plastering purpose.
      Give also the mix proportions for the two types of mortar. 4 marks
20. Complete the following table from the basic knowledge that you have in fitting. 10marks

<table>
<thead>
<tr>
<th>Linear measurement tools</th>
<th>Angular measurement tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precision</td>
<td>Non precision</td>
</tr>
<tr>
<td>1.</td>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
<td>2.</td>
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<td>3.</td>
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21. a) What do you understand by the term “External rendering”. 2marks

b) List three functions of rendering. 3marks

c) Enumerate any five types of render which are common in construction. 5marks

Section III. Choose and answer one question 15marks

22. a) Explain the following types of stone surface finishes: 5marks

i) Rock faced or Quarry faced

ii) Hammer dressed finish

iii) Axed finish

b) Identify any other ten types of stone finish apart from the three types given below to be explained. 10marks

23. a) Describe and provide drawings of eight types of pointing. 8marks

b) Draw a well cased revolving door and mention five parts on it. 7marks

24. Identify and slightly talk about any fifteen types of paints. 15marks