# A.F.P.A. FALL 2015 \& SPRING 2016 GRADE EXAM 

Name: $\qquad$ Date: $\qquad$
Company: $\qquad$ Location: $\qquad$
Mark the answer you choose with an [X]. ONLY ONE ANSWER PER QUESTION PLEASE!

1. Which of the following Species belong in the S-P-F?
[ ]Sitka Spruce
[ ] Ponderosa Pine
[ ] Black Spruce
[ ] Tamarack
2. In a living tree, which is more likely to rot?
[ ] Bark
[ ] Bast
[ ]Sapwood
[ ] Heartwood
3. Water contained in the cell walls is called:
[ ] Free Water
[ ] Bound Water
[ ] Flow Water
[ ] Held Water
4. A growth ring composed of cells which have Thick Walls and Small Cavities is called:
[ ] Annual Ring [ ] Springwood [ ] Heart Wood [ ] None of these
5. A piece of wood that dries from $85 \% \mathrm{MC}$ to $45 \% \mathrm{MC}$ will become:
[ ]Durable
[ ] Smaller
[ ] Stronger
[ ] Lighter

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6. Maximum moisture content for lumber sold as KD-HT is :
[ ] 12\%
[ ] 15\%
[ ] 19\%
[ ] 26\%
7. A deviation FLATWISE from a line drawn END to END, is what kind of warp:
[ ] Crook
[ ] Cup
[ ] Bow
[ ]Twist
8. Moisture is able to transfer from cell to cell through small opening called:
[ ]Pits
[ ] Wood Rays
[ ]Sapwood
[ ] Bast
9. Bark or lack of wood, on the edge or corner of a piece of lumber, is known as:
[ ] Manufactured hole [ ] Eased Edge
[ ] Wane
[ ] Skip

| Mark the following DEFECTS under the correct CLASSIFICATION: |  |  |  |  |  |
| :---: | :--- | :---: | :---: | :---: | :---: |
|  | Defect | Natural | Manufacturing | Seasoning |  |
| 10. | Spike Knots | $[~]$ | $[~]$ | $[~]$ |  |
| 11. | Roller Check | $[~]$ | $[~]$ | $[~]$ |  |
| 12. | White Speck | $[~]$ | $[~]$ | $[~]$ |  |
| 13. | Wane | $[~]$ | $[~]$ | $[~]$ |  |


| Match the following MANUFACTURING DEFECTS to the correct DEPTH CLASSIFICATION: |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | DEFECT | 1/64" | 1/32 |  | 1/16" | 1/8" | Over 1/8" |
| 14. | Heavy Skip | [ ] | [ ] |  | [ ] | [ ] | [ ] |
| 54. | Medium Mismatch | [ ] | [ ] |  | [ ] | [ ] | [ ] |
| 16. | Very Light Offset | [ ] | [ ] |  | [ ] | [ ] | [ ] |
| 17. | Light Wavy Dressing | [ ] | [ ] |  | [ ] | [ ] | [ ] |
| Mark the correct dressed THICKNESS for the following: |  |  |  |  |  |  |  |
| 18. | $3 \times 4$ S-GRN | [ ] $21 / 2^{\prime \prime}$ |  | ] $23 / 4$ " |  | [ ] $29 / 16^{\prime \prime}$ | [ ] 2 5/8" |
| 19. | $1 \times 6 \mathrm{KD}-\mathrm{HT}$ | [ ] 1/2" |  | ] 5/8" |  | [ ] 3/4" | [ ] 25/32" |
| 20. | $2 \times 8$ S-GRN | [ ] $19 / 16{ }^{\prime \prime}$ |  | ] $11 / 2^{\prime \prime}$ |  | [ ] 15/8" | [ ] $11 / 4^{\prime \prime}$ |
| 21. | $4 \times 10$ S-DRY | [ ] 3 1/4" |  | ] $33 / 4{ }^{\prime \prime}$ |  | [ ] $31 / 2^{\prime \prime}$ | [ ] 4 " |

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Mark the correct dressed WIDTH for the following:

| 22. | $2 \times 10$ S-DRY | [ ] $91 / 4 "$ | [ ] 9 9/16" | [ ] 9 5/8"" | [ ] $91 / 2^{\prime \prime}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 23. | $2 \times 8$ S-GRN | [ ] $71 / 4{ }^{\prime \prime}$ | [ ] $71 / 2^{\prime \prime}$ | [ ] 7 9/16" | [ ] 7 5/8" |
| 24. | $3 \times 6$ S-DRY | [ ] $51 / 2$ | [ ] $59 / 16$ | [ ] 5 5/8" | [ ] 6 |
| 25. | $1 \times 4 \mathrm{KD}-\mathrm{HT}$ | [ ] 3 1/2" | [ ] 3 3/4" | [ ] 17/16" | [ ] 4 " |

Mark the Highest grade of Par. 121 Stud that allows the following for a $2 \times 6-925 / 8$ '" long:

|  | DEFECT | STUD | ECONOMY |
| :---: | :---: | :---: | :---: |
| 26. | Wane 2/3 thickness on the end | [ ] | [ ] |
| 27. | Wane $2 / 3$ width on the end | [ ] | [ ] |
| 28. | Decay $1 / 3$ the cross section | [ ] | [ ] |
| 29. | Skip 1/8" on one edge 6 " Long | [ ] | [ ] |
| 30. | Spike Knot 45\% displacement | [ ] | [ ] |
| 31. | Split 1/6 the length | [ ] | [ ] |

Mark the HIGHEST grade of Par. 122 Light Framing that allows the following for a $\mathbf{2 \times 4 - 1 6}$ feet long:

|  | DEFECT | CONSTRUCTION | STANDARD | UTILITY | ECONOMY |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 32. | White Speck 1/3 of the volume | [ ] | [ ] | [ ] | [ ] |
| 33. | Three Face Shake | [ ] | [ ] | [ ] | [ ] |
| 34. | Full length wane, $1 / 4$ thickness | [ ] | [ ] | [ ] | [ ] |
| 35. | Decay $1 / 3$ the cross section | [ ] | [ ] | [ ] | [ ] |
| 36. | Knot $21 / 2^{\prime \prime}$ on the edge of face | [ ] | [ ] | [ ] | [ ] |
| 37. | Split 1/6 the length | [ ] | [ ] | [ ] | [ ] |
| 38. | Wane completely across the wide face away from the end | [ ] | [ ] | [ ] | [ ] |
| 39. | Light warp | [ ] | [ ] | [ ] | [ ] |
| 40. | Surface shake 24" Long | [ ] | [ ] | [ ] | [ ] |

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| Mark the HIGHEST grade of Par. 124 Structural Light Framing and Joist \& Planks that allows the following in a $2 \times 6$-16 feet long: |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | DEFECT | SEL STR | \#1 | \#2 | \#3 | NONE |
| 41. | Wane 1/4 T x 1/3 W full length | [ ] | [ ] | [ ] | [ ] | [ ] |
| 42. | 100\% Heart Stain | [ ] | [ ] | [ ] | [ ] | [ ] |
| 43. | Surface Shake 2 feet long | [ ] | [ ] | [ ] | [ ] | [ ] |
| 44. | Slope of Grain 1 in 4 | [ ] | [ ] | [ ] | [ ] | [ ] |
| 45. | Shake through the edge (3 face) | [ ] | [ ] | [ ] | [ ] | [ ] |
| 46. | Light Warp | [ ] | [ ] | [ ] | [ ] | [ ] |
| 47. | Skip $1 / 4$ inch deep full length | [ ] | [ ] | [ ] | [ ] | [ ] |
| 48. | Through Shake 3 feet long | [ ] | [ ] | [ ] | [ ] | [ ] |
| 49. | Wane 1/2 $\mathrm{T} \times 1 / 2 \mathrm{~W}$ full length | [ ] | [ ] | [ ] | [ ] | [ ] |
| 50. | Wane $1 / 3 T \times 1 / 3 W$ Maximum Equiv. | [ ] | [ ] | [ ] | [ ] | [ ] |
| 51. | Decay $1 / 2 \mathrm{~W} \times 2$ inches long | [ ] | [ ] | [ ] | [ ] | [ ] |
| 52. | Edge Knot 1-7/8" | [ ] | [ ] | [ ] | [ ] | [ ] |
| 53. | Split Width of the piece | [ ] | [ ] | [ ] | [ ] | [ ] |
| 54. | Surface shake $1 / 2$ length | [ ] | [ ] | [ ] | [ ] | [ ] |
| 55. | White Speck 1/3 Volume | [ ] | [ ] | [ ] | [ ] | [ ] |
| 56. | 16 Grub Holes | [ ] | [ ] | [ ] | [ ] | [ ] |

List the knot sizes for the following KD-HT 2 x 6's
57. List the knot size:

58. List the knot size:

59.

$1 "$ SIZE

60. List the knot size
$23 / 4 "$
1"
2 3/4"


1/2" 3/4" SIZE


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