# Floriculture

# CDE Guide

# FLORICULTURE

## 1. Purpose

The Floriculture CDE is designed to create an interest in career preparation for all current and future aspects of the floriculture industry.

## 2. Objectives

a. Identify plant materials, supplies, and equipment utilized in the industry.
b. Demonstrate the principles of design and develop related skills.
c. Demonstrate interpersonal skills necessary for successful employment in the industry.

## 3. Rules

a. Each chapter may enter up to five (5) participants. The team score will be determined by the three highest scores from that chapter.
b. Under no circumstances will any participant be allowed to touch or handle plant materials during the event except in the practicum. Any violation of this rule will result in the participant's disqualification.
c. No team, team member, or team coach shall visit the event facilities to observe plant materials a week prior to the event. Any team, team member or team coach reported and proven to do so will cause the disqualification of that team.
d. Students will use Universal Form C #705C-1 for most practicums. Any participant caught cheating will be dismissed from that phase of the event.
e. To facilitate the holding of scorecards during the event, participants are urged to bring and use clean un-marked clipboards. All participants must bring their own #2 hardness lead pencil(s).

## 4. Format

a. Plant/Equipment Identification

1. Sixty specimens (50 plants and 10 equipment) from the Floral ID and Equipment ID lists will be displayed to be identified. Each specimen will be designated by a number.
2. Universal Form C will be used to record answers.
3. This section is split into two rotations with each having 30 specimens for identification.
4. Five points will be award for each specimen that is correctly identified. (Total 300 points.)
5. Participants will be allowed 30 minutes to complete each section.
6. No plants or equipment may be touched or handled in any way.

b. Customer Assistance/Sales Practicum

1. This practicum in interpersonal relations is designed to evaluate the participant's knowledge and ability in verbal communications, salesmanship, customer relations, and completion of business forms and knowledge of plant materials, floral selection and design.

2. Individuals will be provided an order form plus any other materials appropriate for the practicum.
3. The participant will assume the role of an employee of a small flower shop/greenhouse - "Campus Florals" An event official will assume the role of a customer desiring to place an order. Interaction between the employee and the customer may be by telephone or face to face. Limited information will be provided by the customer upon placing the order, the remaining required information must be gathered through interaction with the customer.
4. A maximum of five minutes will be allowed for taking the order. An additional five minutes may be used for completion of the order form.
5. The order form will be the only material used. Participants will use the "Campus Florals'" order form. The resulting written order form will be evaluated and scored as a part of this phase.
6. This practicum is worth 100 points.
7. Each rotation will have 30 minutes.

c. Corsage and Boutonniere Practicum

1. Participants will be given thirty (30) minutes in which to complete a corsage and matching/complimentary boutonniere.
2. All plant and non-plant materials needed to complete these practicums shall be provided.
3. The corsage shall be multiple flowered and must have a bow or other such appropriate condiment. This corsage should be of the design to be worn pinned on a dress.
4. The corsage is worth 100 pts.
5. The boutonniere shall be a single flower with appropriate condiments and shall match/compliment the corsage.
6. The boutonniere is worth 100 pts.
7. The completed boutonniere and corsage are to be placed in corsage bags along with corsage/boutonniere scorecards. Participants are not to mist or seal the bags. Attach the bags containing the completed products with a pin and hand in.

d. Written Test

1. Fifty objective type multiple-choice questions will be selected from the areas on the following list:

| | | | |
|---|---|---|---|
| 1. Plant Materials | 2. Planting or Growing media | 3. Diagnosis of Plant Disorders | 4. Materials: growth regulators, fertilizer, etc. |
| 5. Propagation | 6. Safety | 7. Cultural Instructions | 8. Floral marketing |

2. This phase of the event will test knowledge and understanding of the basic principles relating to the following areas of horticulture (for example: questions for the plant

materials area may deal with such features as anatomy of a flower or leaf, physiology of specific types of plants important to the horticulture industry, etc.).

3. Individuals will be allowed 30 minutes to complete this phase.
4. Each answer has a value of 4 points for a total of 200 points.

e. Problem Solving

1. Each participant will solve 10 problems related to the various aspects of the floriculture industry using commonly accepted standards and available information to solve a problem specific to a particular area of floriculture production or retailing.
2. See the National FFA Career Development Events Guide for examples.
3. Participants will be allowed 30 minutes to complete this phase.
4. Each correct solution has a value of 10 points for a total of 100 points

**5. Scoring**

| Part | Minutes/Part | Individual Points | Team Points |
|---|---|---|---|
| Written Test | 30 | 200 | 600 |
| Problem Solving | 30 | 100 | 300 |
| Corsage & Boutonniere | 30 | 200 | 600 |
| Customer assistance/sales | 30 | 100 | 300 |
| Plant/Equipment ID | 60 | 300 | 900 |
| **Total** | | 900 | 2700 |

**6. Awards**

a. Individual

1. Individual scores will be tabulated and broken into gold, silver, and bronze award areas.
2. Individual ties will not be broken
3. The high induvial receives the “baby bison” trophy and a $100 stipend.

b. Team

1. Team scores will be tabulated by adding the top three-member scores. They will be broken into gold, silver, and bronze.
2. The high team shall be eligible to represent North Dakota in the National FFA Floriculture career development event. The high team receives the Traveling Trophy and travel stipends to participate in the National Event.
3. Team Tie Breakers: 1) Team Plant ID; 2) Team Written Exam Score; 3) Corsage Team Score.

**SAMPLE CUSTOMER SERVICE/SALES ORDER PROBLEMS**

1. A single sided arrangement for a 14-year-old boy in the hospital with a broken leg from a football game.
2. A small tabletop arrangement for a coffee table, to be used at a spring meeting of the neighborhood social committee.
3. A full arrangement to be used at the dinner table for Thanksgiving.
4. A small funeral arrangement for an elderly acquaintance.
5. An end-table arrangement for the Christmas season.
6. A friendship arrangement for a classmate.
7. A Valentine arrangement for a Grandmother living in a retirement home.
8. A "bunch" of roses for a spouse on their birthday.
9. A Mother's Day arrangement.
10. Long-stem roses for a high school coronation.
11. A corsage for a prom date.
12. An alter arrangement for the church Easter services.

**EXAMPLE CUSTOMER SERVICE/SALES PROBLEM**

Information given when placing the order

1. Arrangement is needed for presentation to the Queen at a High School Homecoming Coronation.
2. Price range is $20-$25

Information to be provided through questions

1. Location of the coronation - Anytown High School, 1111 11th Ave. North, Fargo
2. Date - June 15, 1:30 pm
3. Delivery - by 1:00 pm
4. School Colors - Blue, Yellow and White
5. School Logo - Rockets
6. Flower Preference - Mums and Carnations
7. Type of Arrangement - Single sided
8. Card - "Congratulations from the Anytown Alumni!"
9. Billing - Credit card - FM Charge FMFS222-58000

   Frank Smith, Box 222, Fargo, ND 58100 - Phone - 237-7777

Information Given to the Participant

1. Greenhouse - "Campus Florals"
2. Location - North Fargo
3. Delivery policy - free in-town delivery
4. Pricing - All prices include applicable taxes
5. Flowers available - Pom Pom Mum, Spider Mum, Daisy, Gladioli, Carnation, Rose.

# Floriculture Equipment Identification

| | |
|---|---|
| 240 | #3 Ribbon (satin, sheer, wired) |
| 241 | #40 Ribbon (satin, sheer, wired) |
| 242 | #9 Ribbon (satin, sheer, wired) |
| 243 | 18 Gauge floral wire |
| 244 | 28 Gauge floral wire |
| 245 | Anvil-and-blade pruner |
| 246 | Bouquet sleeve |
| 247 | Cardette |
| 248 | Cell pack containers |
| 249 | Coconut coir |
| 250 | Corsage box |
| 251 | Corsage pin |
| 252 | Dry foam |
| 253 | Enclosure card |
| 254 | Fern greening pins |
| 255 | Floral adhesive |
| 256 | Floral foam |
| 257 | Floral knife |
| 258 | Floral preservate |
| 259 | Floral stem tape |
| 260 | Glue gun |
| 261 | Glue pan |
| 262 | Granular fertilizer |
| 263 | Hanging basket |
| 264 | Hook-and-blade pruners (bypass pruners) |
| 265 | Irrigation tape |
| 266 | Mist nozzle (mist bed) |

| | |
|---|---|
| 267 | Nosegay holder |
| 268 | Nursery container |
| 269 | Oscillating sprinkler |
| 270 | Peat moss |
| 271 | Peat pots |
| 272 | Pest strips |
| 273 | pH testing meter |
| 274 | Resin-coated fertilizer |
| 275 | Ribbon shears |
| 276 | Rose and stem flower stripper |
| 277 | Shade fabric |
| 278 | Sheet moss |
| 279 | Soil moisture meter |
| 280 | Spaghetti tubing (1/4” diameter or less) |
| 281 | Spanish moss |
| 282 | Tulle |
| 283 | Vermiculite |
| 284 | Water picks |
| 285 | Water soluble fertilizer |
| 286 | Waterproof container tape |
| 287 | Wire cutter |
| 288 | Wooden pick |
| 289 | Wrist corsage holder |

**CAMPUS FLORALS**
222 2ND AVENUE NORTH
FARGO, ND 58000
PHONE: 701.237.0000

| Order Date | Completion Date |
|---|---|
| Name | |
| Address | |
| Phone | |
| Billing | |
| ❑ PICKUP<br>❑ DELIVER TO: | Name |
| Address | Time |

| Description | UNIT COST | TOTAL COST |
|---|---|---|
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| | | |
| **TOTAL PRICE** | | |

Salesperson

SFN 15044 (09-03) Department of Career and Technical Education

**CAMPUS FLORALS**
222 2ND AVENUE NORTH
FARGO, ND 58000
PHONE: 701.237.0000

| Order Date | Completion Date |
|---|---|
| Name | |
| Address | |
| Phone | |
| Billing | |
| ❑ PICKUP<br>❑ DELIVER TO: | Name |
| Address | Time |

| Description | UNIT COST | TOTAL COST |
|---|---|---|
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| | | |
| **TOTAL PRICE** | | |

Salesperson

SFN 15044 (09-03) Department of Career and Technical Education

# NORTH DAKOTA FLORAL IDENTIFICATION

FORM 15 (01-01)

| | COMMON NAME | BOTANICAL NAME |
|---|---|---|
| 101. | Bromeliad | Aechmea chantinii cv. |
| 102. | Ageratum | Ageratum mexicanum cv.* |
| 103. | Aglaonema | Aglaonema commutatum cv. |
| 104. | Peruvian Lily | Alstroemeria aurantiaca |
| 105. | Snapdragon | Anthirrhinum majus cv. |
| 106. | Anthurium, Flamingo Lily | Anthurium x andraeanum cv. |
| 107. | Aphelandra, Zebra Plant | Aphelandra squarrosa cv. |
| 108. | Norfolk Island Pine | Araucaria heterophylla |
| 109. | Sprengeri "Fern" | Asparagus densiflorous 'Sprengeri' |
| 110. | Asparagus "Fern" | Asparagus setaceus |
| 111. | Astilbe | Astilbe hybrid cv. |
| 112. | Tuberous Begonia | Begonia x tuberhybrida cv. |
| 113. | Wax Begonia | Begonia x semperflorens-cultorum |
| 114. | Fancy-Leaved Caladium | Caladium x hortulanum cv. |
| 115. | Pocketbook Plant | Calceolaria crenatiflora cv. |
| 116. | China Aster | Callistephus chinensis cv. |
| 117. | Common Camellia | Camellia japonica cv. |
| 118. | Common Garden Canna | Canna x generalis cv. |
| 119. | Madagascar Periwinkle | Catharanthus roseus |
| 120. | Cattleya Orchid Hybrid | Cattleya cv. |
| 121. | Cockscomb | Celosia cristata cv. |
| 122. | Parlor Palm | Chamaedorea elegans |
| 123. | Waxflower | Chamelaucium uncinatum |
| 124. | Spider Plant | Chlorophytum commosum cv. |
| 125. | Marguerite Daisy | Chrysanthemum frutescens |
| 126. | Florist's Chrysanthemum | Chrysanthemum x morifolium cv. |
| 127. | Shasta Daisy | Chrysanthemum x superbum cv. |
| 128. | Grape Ivy | Cissus rhombifolia “Mandaiana” |
| 129. | Clematis | Clematis Jackmanii Group cv. |
| 130. | Croton | Codiaeum variegatum var. pictum cv. |
| 131. | Coleus | Coleus x hybridus |
| 132. | Jade Plant | Crassula argentea |
| 133. | Florist's Cyclamen | Cyclamen x persicum cv. |
| 134. | Cymbidium Orchid | Cymbidium cv. |
| 135. | Carnation | Dianthus caryophyllus cv. |
| 136. | Spotted Dumbcane | Dieffenbachia maculata cv. |
| 137. | Corn Plant Dracaena | Dracaena fragrans 'Massangeana' |
| 138. | Red Edge Dracaena | Dracaena cincta |
| 139. | Hen and Chickens | Echeveria cv. |
| 140. | Barrel Cactus | Echinocactus cv. |
| 141. | Golden Pothos, Devil's Ivy | Epipremnum aureum cv. |
| 142. | Spring Heather | Erica carnea cv. |
| 143. | Silver Dollar Gum | Eucalyptus polyanthemos |
| 144. | Crown-of-Thorns | Euphorbia milii splendens |
| 145. | Poinsettia | Euphorbia pulcherrima cv. |
| 146. | German (Persian) Violet | Exacum affine |
| 147. | Benjamin Fig | Fiscus benjamina 'Exotica' |
| 148. | 'Decora' Rubber Plant | Ficus elastica 'Decora' |
| 149. | Creeping Rubber Plant | Ficus pumila |
| 150. | Freesia | Freesia x hybrida |
| 151. | Nerve Plant | Fittonia verschaffeltii |
| 152. | Gardenia | Gardenia jasminoides 'Fortuniana' |
| 153. | Garden Gladiolus | Gladiolus x hortulanus cv. |
| 154. | Transvaal Daisy | Gerbera jamesonii |
| 155. | ‘Purple Passion’, Velvet Plant | Gynura aurantiaca 'Sarmentosa' |
| 156. | Baby's Breath | Gypsophila elegans cv. |
| 157. | English Ivy | Hedera helix cv. |
| 158. | Dwarf Schefflera, Dwarf Octopus Tree | Heptapleurum arbicola |
| 159. | Daylily | Hemerocallis cv. |
| 160. | Amaryllis | Hippeastrum hybrid cv. |
| 161. | Plantain Lily | Hosta undulata cv. |
| 162. | Wax Plant | Hoya carnosa |
| 163. | Hyancinth | Hyacinthus orientalis cv. |
| 164. | French (Florist's) Hydrangea | Hydrangea macrophylla cv. |
| 165. | Impatiens | Impatiens hybrid cv. |
| 166. | Flag Bearded Iris | Iris x germanica florentina cv. |

| | COMMON NAME | BOTANICAL NAME |
|---|---|---|
| 167. | Dutch Iris | Iris x xiphium cv. |
| 168. | Shrimp Plant | Justicia brandegeana |
| 169. | Kalanchoe | Kalanchoe x blossfeldiana cv. |
| 170. | Liatris | Liatris spicta |
| 171. | Trumpet (Easter) Lily | Lilium longiflorum cv. |
| 172. | Hybrid (Garden) Lily | Lilium x hybridum cv. |
| 173. | Statice | Limonium sinuatum |
| 174. | Sweet Alyssum | Lobularia maritima |
| 175. | Prayer Plant | Maranta leuconeura kerchoviana |
| 176. | Flowering Stock | Matthiola incana cv. |
| 177. | Cutleaf Philodendron | Monstera deliciosa |
| 178. | Daffodil | Narcissus pseudo-narcissus cv. |
| 179. | Bromeliad | Neoregelia carolinae 'Tricolor' |
| 180. | Boston Fern | Nephrolepis exaltata cv. |
| 181. | Cactus | Opuntia tribe cv. |
| 182. | Peony | Paeonia cv. |
| 183. | Ladyslipper Orchid | Paphiopedilum x hybrid cv. |
| 184. | Regal (Lady Washington) Geranium | Pelargonium x domesticum cv. |
| 185. | (Zonal) Geranium | Pelargonium x hortorum cv. |
| 186. | Ivy Geranium | Pelargonium peltatum cv. |
| 187. | Watermelon Peperomia | Peperomia argyreia |
| 188. | Emerald Ripple Peperomia | Peperomia caperata |
| 189. | Variegated Peperomia | Peperomia obtusifolia 'Variegata' |
| 190. | Common Garden Petunia | Petunia x hybrida cv. |
| 191. | Phalaenopsis (Butterfly) Orchid | Phalaenopsis cv. |
| 192. | Heartleaf Philodendron | Philodendron scandens oxycardium |
| 193. | Aluminum Plant | Pilea cadierei |
| 194. | Friendship Plant | Pilea involucrata |
| 195. | Artillery Plant | Pilea microphylla |
| 196. | Creeping Charley | Pilea Nummulariifolia |
| 197. | Swedish Ivy | Plectranthus mummularis |
| 198. | Tuberose | Polianthes tuberosa |
| 199. | Polyanthus (Primrose) | Primula x polyanthus cv. |
| 200. | Fairy Primrose | Primula malacoides cv. |
| 201. | Azalea | Rhododendron cv. |
| 202. | Hybrid Tea Rose | Rosa hybrid, Class Hybrid Tea cv. |
| 203. | Leatherleaf Fern | Rumohra adiantiformis |
| 204. | African Violet | Saintpaulia ionantha cv. |
| 205. | Salvia | Salvia splendens cv. |
| 206. | Snake Plant | Sansevieria trifasciata cv. |
| 207. | Strawberry Plant | Saxifraga stolonifera |
| 208. | Christmas Cactus | Schlumbergia bridgesii |
| 209. | Thanksgiving Cactus, Crab Cactus | Schlumbergia truncata cv. |
| 210. | Diamond Dusty Miller | Senecio cineraria 'Diamond' |
| 211. | Florist's Cineraria | Senecio x hybridus cv. |
| 212. | Gloxinia | Sinningia speciosa Fyfiana Group cv. |
| 213. | Jerusaleum Cherry | Solanium pseudocapsicum cv. |
| 214. | White Anthurium, Peace Lily | Spathiphyllum clevelandii |
| 215. | Stephanotis | Stephanotis floribunda |
| 216. | Bird-of-Paradise | Sterlitzia reginae |
| 217. | Nephthytis | Syngonium podophyllum |
| 218. | Marigold | Tagetes species cv. |
| 219. | Picaback Plant | Tolmeia menziesii |
| 220. | Tulip | Tulipa cv. |
| 221. | Florist's "Huckleberry" | Vaccinium ovatum |
| 222. | (Garden) Pansy | Viola x wittrockiana cv. |
| 223. | Wandering Jew | Zebrina pendula cv. |
| 224. | Zinnia | Zinnia elegans |

## FLORICULTURE CUSTOMER ASSISTANCE PRACTICUM SCORE CARD

DEPARTMENT OF CAREER AND TECHNICAL EDUCATION

SFN 15045 (09-03)

| Final Score |
|---|
| |

| Contestant's No. | Contestant's Name |
|---|---|
| | |

| Chapter | Possible Points | Contestant Points |
|---|---|---|
| **Conversation (70 points)** | | |
| Approach | 5 | |
| Voice | 12 | |
| Personality | 17 | |
| Information Gathered From Customer | 15 | |
| Salesmanship | 14 | |
| Closing of Order | 7 | |
| **Written Order (30 points)** | | |
| Delivery Instructions | 4 | |
| Descriptions of Floral Items | 6 | |
| Billing Information | 6 | |
| Card Message | 4 | |
| Neatness and Completeness | 5 | |
| Correct Computation | 5 | |
| **TOTAL POINTS** | **100** | |


## FLORICULTURE CUSTOMER ASSISTANCE PRACTICUM SCORE CARD

DEPARTMENT OF CAREER AND TECHNICAL EDUCATION

SFN 15045 (09-03)

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|---|
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| Delivery Instructions | 4 | |
| Descriptions of Floral Items | 6 | |
| Billing Information | 6 | |
| Card Message | 4 | |
| Neatness and Completeness | 5 | |
| Correct Computation | 5 | |
| **TOTAL POINTS** | **100** | |

## CORSAGE & BOUTONNIERE PRACTICUM SCORE CARD

DEPARTMENT OF CAREER AND TECHNICAL EDUCATION
SFN 15046 (09-03)

| Final Score | |
|---|---|

| Contestant Number | Contestant Name |
|---|---|
| | |

| Chapter | Possible Points | Contestant Points |
|---|---|---|
| Wiring and Taping | 20 | |
| Use of Ribbon | 20 | |
| Design | 20 | |
| Wearability | 20 | |
| Packaging | 20 | |
| **TOTAL POINTS** | **100** | |


## CORSAGE & BOUTONNIERE PRACTICUM SCORE CARD

DEPARTMENT OF CAREER AND TECHNICAL EDUCATION
SFN 15046 (09-03)

| Final Score | |
|---|---|

| Contestant Number | Contestant Name |
|---|---|
| | |

| Chapter | Possible Points | Contestant Points |
|---|---|---|
| Wiring and Taping | 20 | |
| Use of Ribbon | 20 | |
| Design | 20 | |
| Wearability | 20 | |
| Packaging | 20 | |
| **TOTAL POINTS** | **100** | |

## CORSAGE & BOUTONNIERE PRACTICUM SCORE CARD

DEPARTMENT OF CAREER AND TECHNICAL EDUCATION
SFN 15046 (09-03)

| Final Score | |
|---|---|

| Contestant Number | Contestant Name |
|---|---|
| | |

| Chapter | Possible Points | Contestant Points |
|---|---|---|
| Wiring and Taping | 20 | |
| Use of Ribbon | 20 | |
| Design | 20 | |
| Wearability | 20 | |
| Packaging | 20 | |
| **TOTAL POINTS** | **100** | |

## CORSAGE & BOUTONNIERE PRACTICUM SCORE CARD

DEPARTMENT OF CAREER AND TECHNICAL EDUCATION
SFN 15046 (09-03)

| Final Score | |
|---|---|

| Contestant Number | Contestant Name |
|---|---|
| | |

| Chapter | Possible Points | Contestant Points |
|---|---|---|
| Wiring and Taping | 20 | |
| Use of Ribbon | 20 | |
| Design | 20 | |
| Wearability | 20 | |
| Packaging | 20 | |
| **TOTAL POINTS** | **100** | |

# Universal Form C #705C-1

Incorrect Marks ✓ ✗ — •  Correct Mark ●

**Team Name / Additional Info**

**Team #**

**State**

**Last Name**

**First Name**

**Code**

**Placing Classes**

Mark one answer in each column!

| | 1 | 2 | 3 | 4 | 5 | 6 | |
|---|---|---|---|---|---|---|---|
| 1 1234 | ○ | ○ | ○ | ○ | ○ | ○ | 1234 |
| 2 1243 | ○ | ○ | ○ | ○ | ○ | ○ | 1243 |
| 3 1324 | ○ | ○ | ○ | ○ | ○ | ○ | 1324 |
| 4 1342 | ○ | ○ | ○ | ○ | ○ | ○ | 1342 |
| 5 1423 | ○ | ○ | ○ | ○ | ○ | ○ | 1423 |
| 6 1432 | ○ | ○ | ○ | ○ | ○ | ○ | 1432 |
| 7 2134 | ○ | ○ | ○ | ○ | ○ | ○ | 2134 |
| 8 2143 | ○ | ○ | ○ | ○ | ○ | ○ | 2143 |
| 9 2314 | ○ | ○ | ○ | ○ | ○ | ○ | 2314 |
| 10 2341 | ○ | ○ | ○ | ○ | ○ | ○ | 2341 |
| 11 2413 | ○ | ○ | ○ | ○ | ○ | ○ | 2413 |
| 12 2431 | ○ | ○ | ○ | ○ | ○ | ○ | 2431 |
| 13 3124 | ○ | ○ | ○ | ○ | ○ | ○ | 3124 |
| 14 3142 | ○ | ○ | ○ | ○ | ○ | ○ | 3142 |
| 15 3214 | ○ | ○ | ○ | ○ | ○ | ○ | 3214 |
| 16 3241 | ○ | ○ | ○ | ○ | ○ | ○ | 3241 |
| 17 3412 | ○ | ○ | ○ | ○ | ○ | ○ | 3412 |
| 18 3421 | ○ | ○ | ○ | ○ | ○ | ○ | 3421 |
| 19 4123 | ○ | ○ | ○ | ○ | ○ | ○ | 4123 |
| 20 4132 | ○ | ○ | ○ | ○ | ○ | ○ | 4132 |
| 21 4213 | ○ | ○ | ○ | ○ | ○ | ○ | 4213 |
| 22 4231 | ○ | ○ | ○ | ○ | ○ | ○ | 4231 |
| 23 4312 | ○ | ○ | ○ | ○ | ○ | ○ | 4312 |
| 24 4321 | ○ | ○ | ○ | ○ | ○ | ○ | 4321 |
| | 1 | 2 | 3 | 4 | 5 | 6 | |

**Keep/Cull 1**

| # | Keep | Cull |
|---|---|---|
| 1 | K | C |
| 2 | K | C |
| 3 | K | C |
| 4 | K | C |
| 5 | K | C |
| 6 | K | C |
| 7 | K | C |
| 8 | K | C |

Mark 4 Keeps and 4 Culls!

**Keep/Cull 2**

| # | Keep | Cull |
|---|---|---|
| 1 | K | C |
| 2 | K | C |
| 3 | K | C |
| 4 | K | C |
| 5 | K | C |
| 6 | K | C |
| 7 | K | C |
| 8 | K | C |

Mark 4 Keeps and 4 Culls!

**Keep/Cull 3**

| # | Keep | Cull |
|---|---|---|
| 1 | K | C |
| 2 | K | C |
| 3 | K | C |
| 4 | K | C |
| 5 | K | C |
| 6 | K | C |
| 7 | K | C |
| 8 | K | C |

Mark 4 Keeps and 4 Culls!

**Keep/Cull 4**

| # | Keep | Cull |
|---|---|---|
| 1 | K | C |
| 2 | K | C |
| 3 | K | C |
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Mark 4 Keeps and 4 Culls!

**Judge 1**

**Judge 2**

**Judge 3**

**Judge 4**

**Exam 1**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | A | B | C | D | E | 26 | A | B | C | D | E |
| 2 | A | B | C | D | E | 27 | A | B | C | D | E |
| 3 | A | B | C | D | E | 28 | A | B | C | D | E |
| 4 | A | B | C | D | E | 29 | A | B | C | D | E |
| 5 | A | B | C | D | E | 30 | A | B | C | D | E |
| 6 | A | B | C | D | E | 31 | A | B | C | D | E |
| 7 | A | B | C | D | E | 32 | A | B | C | D | E |
| 8 | A | B | C | D | E | 33 | A | B | C | D | E |
| 9 | A | B | C | D | E | 34 | A | B | C | D | E |
| 10 | A | B | C | D | E | 35 | A | B | C | D | E |
| 11 | A | B | C | D | E | 36 | A | B | C | D | E |
| 12 | A | B | C | D | E | 37 | A | B | C | D | E |
| 13 | A | B | C | D | E | 38 | A | B | C | D | E |
| 14 | A | B | C | D | E | 39 | A | B | C | D | E |
| 15 | A | B | C | D | E | 40 | A | B | C | D | E |
| 16 | A | B | C | D | E | 41 | A | B | C | D | E |
| 17 | A | B | C | D | E | 42 | A | B | C | D | E |
| 18 | A | B | C | D | E | 43 | A | B | C | D | E |
| 19 | A | B | C | D | E | 44 | A | B | C | D | E |
| 20 | A | B | C | D | E | 45 | A | B | C | D | E |
| 21 | A | B | C | D | E | 46 | A | B | C | D | E |
| 22 | A | B | C | D | E | 47 | A | B | C | D | E |
| 23 | A | B | C | D | E | 48 | A | B | C | D | E |
| 24 | A | B | C | D | E | 49 | A | B | C | D | E |
| 25 | A | B | C | D | E | 50 | A | B | C | D | E |

**Exam 2**

| | | | | | |
|---|---|---|---|---|---|
| 1 | A | B | C | D | E |
| 2 | A | B | C | D | E |
| 3 | A | B | C | D | E |
| 4 | A | B | C | D | E |
| 5 | A | B | C | D | E |
| 6 | A | B | C | D | E |
| 7 | A | B | C | D | E |
| 8 | A | B | C | D | E |
| 9 | A | B | C | D | E |
| 10 | A | B | C | D | E |
| 11 | A | B | C | D | E |
| 12 | A | B | C | D | E |
| 13 | A | B | C | D | E |
| 14 | A | B | C | D | E |
| 15 | A | B | C | D | E |
| 16 | A | B | C | D | E |
| 17 | A | B | C | D | E |
| 18 | A | B | C | D | E |
| 19 | A | B | C | D | E |
| 20 | A | B | C | D | E |
| 21 | A | B | C | D | E |
| 22 | A | B | C | D | E |
| 23 | A | B | C | D | E |
| 24 | A | B | C | D | E |
| 25 | A | B | C | D | E |

**Exam 3**

| | | | | | |
|---|---|---|---|---|---|
| 1 | A | B | C | D | E |
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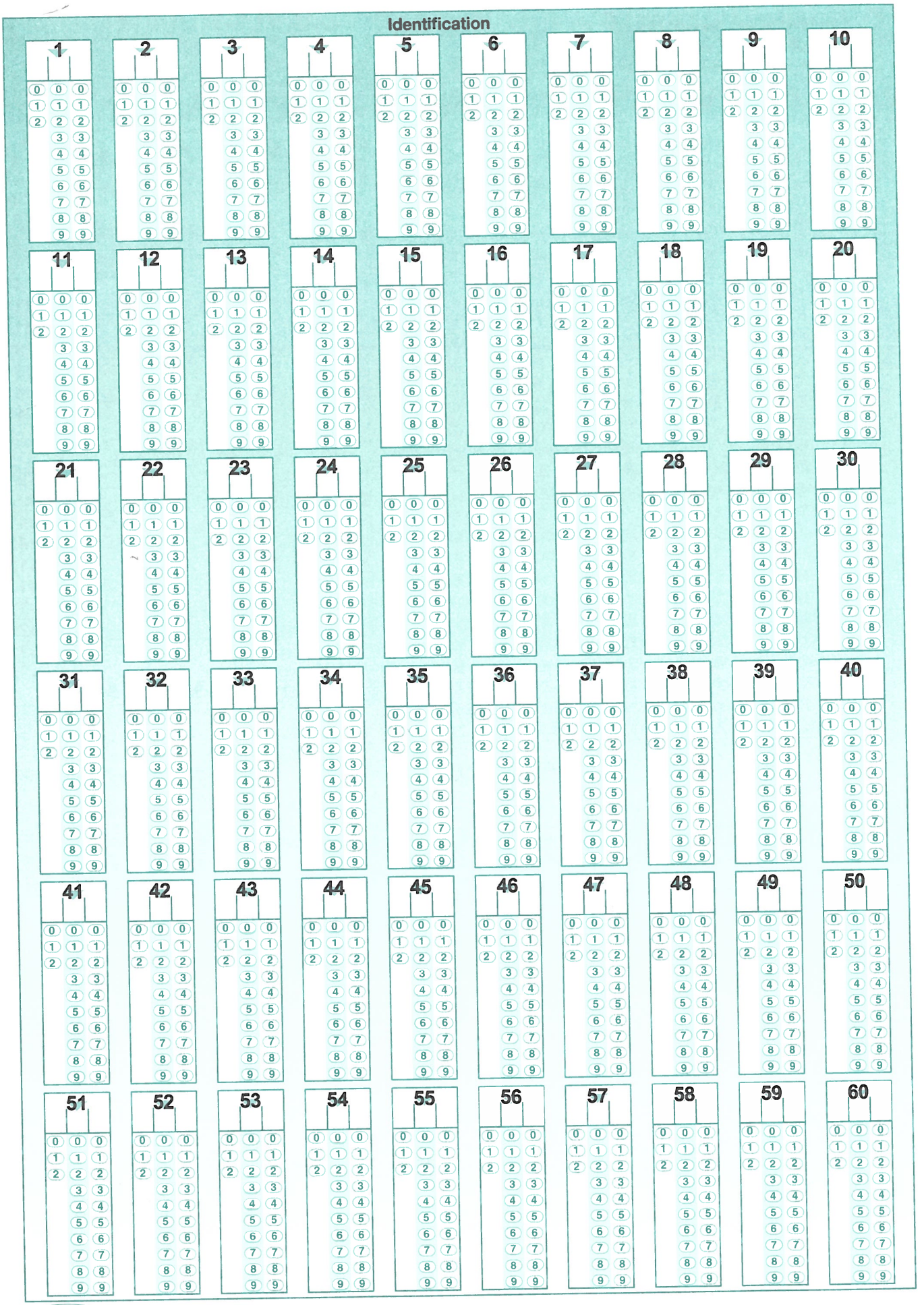
| 4 | A | B | C | D | E |
| 5 | A | B | C | D | E |
| 6 | A | B | C | D | E |
| 7 | A | B | C | D | E |
| 8 | A | B | C | D | E |
| 9 | A | B | C | D | E |
| 10 | A | B | C | D | E |
| 11 | A | B | C | D | E |
| 12 | A | B | C | D | E |
| 13 | A | B | C | D | E |
| 14 | A | B | C | D | E |
| 15 | A | B | C | D | E |
| 16 | A | B | C | D | E |
| 17 | A | B | C | D | E |
| 18 | A | B | C | D | E |
| 19 | A | B | C | D | E |
| 20 | A | B | C | D | E |
| 21 | A | B | C | D | E |
| 22 | A | B | C | D | E |
| 23 | A | B | C | D | E |
| 24 | A | B | C | D | E |
| 25 | A | B | C | D | E |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