

APPENDIX IV

IV.1 Inventory of Kitchen - Related Activities

Dear Judge,

Kindly find below a list of activities that are performed in the household kitchens. Also along with, find a sheet of paper with 8 sets of incomplete rings in different sizes, labeled as A, B, C, D, E, F, G, H. If you carefully observe you will find that every ring has an opening/gap and the gap in each of the given rings has its facing in a different direction.

The objective of this exercise is that the visual ease/difficulty in identifying the direction of the gap is to be matched with the visual ease/difficulty in performing the various tasks that are carried out in the domestic kitchen. In other words identification of the direction of the gap in different sizes of the rings measure the visual acuity* associated with different tasks.

You are requested to identify that particular set of ring (either of A, B, C, D, E, F, G, H), the ease/difficulty for identifying the direction of the gap of which can be matched with each of the listed kitchen related activities

*VISUAL ACUITY

According to Philips Manual, 1993

Visual acuity : Capacity for seeing distinctly objects very close together.

According to IES code for interior lighting, 1973.

Visual capacity : Capacity for discriminating between details of objects which are very close together.

Pre-preparation - Related Activities

1.	Cleaning of leafy vegetables - sorting out unwanted/rotten leaves and stalks from leafy vegetables like fenugreek, coriander, amarnath, mint, etc.	A	B	C	D	E	F	G	H
2.	Sorting out waste particles, eg. stones, inferior quality seeds, insects, etc., from grains like rice and 'dal'	A	B	C	D	E	F	G	H
3.	Cleaning of meat	A	B	C	D	E	F	G	H
4.	Measuring of quantity of ingredients required for food preparation.	A	B	C	D	E	F	G	H
5.	Carving of vegetables / fruits in fancy designs for salads	A	B	C	D	E	F	G	H
6.	Cake icing	A	B	C	D	E	F	G	H
7.	Removing of rotten parts or unhealthy stains while cutting fruits and vegetables	A	B	C	D	E	F	G	H
8.	Sorting of small white insects from 'rawa'	A	B	C	D	E	F	G	H
9.	Peeling of fruit like pineapple	A	B	C	D	E	F	G	H
10.	Distinguishing items that appear similar like 'maida', powdered sugar, soda, salt or items like 'garam masala', coriander powder, dry mango powder.	A	B	C	D	E	F	G	H
11.	Inspecting the quality of grains / 'masalas'	A	B	C	D	E	F	G	H
12.	Assessing the purity of water been used for cooking / drinking	A	B	C	D	E	F	G	H
13.	Inspecting the readiness of food item being processed in the mixer / grinder / blender	A	B	C	D	E	F	G	H
14.	Sieving of flour	A	B	C	D	E	F	G	H
15.	Kneading of dough	A	B	C	D	E	F	G	H
16.	Inspection of insects while cutting vegetables like beans, peas, cauliflower, brinjal	A	B	C	D	E	F	G	H
17.	Cleaning of whole masalas like 'jeera', sesame (til) mustard seeds (rye),(Ajwain)	A	B	C	D	E	F	G	H

Cooking Related Activities

1)	Sauting onions till they reach golden brown colour	A	B	C	D	E	F	G	H
2)	Roasting 'rawa' till it is light brown in colour	A	B	C	D	E	F	G	H
3)	Assessing the food items being cooked for its crispness / consistency / doneness	A	B	C	D	E	F	G	H
4)	Assessing the colour of the food items being cooked	A	B	C	D	E	F	G	H
5)	Assessing the readiness of baked items in the oven	A	B	C	D	E	F	G	H
6)	Assessing the readiness of rice being cooked without pressure cooker	A	B	C	D	E	F	G	H
7)	Assessing the colour of food items when they are being fried eg. 'batata wada', 'bhajia'	A	B	C	D	E	F	G	H
8)	Inspecting the desired colour while preparing 'halwa'	A	B	C	D	E	F	G	H
9)	Roasting of 'papad'	A	B	C	D	E	F	G	H
10)	Roasting of 'chapaties' / 'parathas'	A	B	C	D	E	F	G	H
11)	Boiling of milk	A	B	C	D	E	F	G	H
12)	Inspecting colour of tea / coffee	A	B	C	D	E	F	G	H
13)	Garnishing the ready - to - serve food in attractive colour combination	A	B	C	D	E	F	G	H

Cleaning - Related Activities

1)	Cleaning of water glasses having intricate cut work	A	B	C	D	E	F	G	H
2)	Cleaning of the jar of a mixer and it's blades	A	B	C	D	E	F	G	H
3)	Cleaning of the joints / screws that are located between the handle and the body of the pan	A	B	C	D	E	F	G	H
4)	Cleaning of mould with different sizes of 'jalis, for making 'chakli', 'Sev', etc.	A	B	C	D	E	F	G	H
5)	Cleaning of small kitchen tools for chopping and churning	A	B	C	D	E	F	G	H
6)	Cleaning of a manual citrus juicer	A	B	C	D	E	F	G	H
7)	Cleaning of a grater	A	B	C	D	E	F	G	H
8)	Cleaning of utensils with uneven surfaces	A	B	C	D	E	F	G	H
9)	Cleaning of gas burner and its finer parts	A	B	C	D	E	F	G	H
10)	Cleaning of glass bottles with long handled brush	A	B	C	D	E	F	G	H
11)	Cleaning of the handle of a cup	A	B	C	D	E	F	G	H
12)	Cleaning of a tea kettle	A	B	C	D	E	F	G	H
13)	Cleaning of a thermoflask	A	B	C	D	E	F	G	H
14)	Wiping of glass crockery to make them spotless clean	A	B	C	D	E	F	G	H
15)	Cleaning of greasy utensils	A	B	C	D	E	F	G	H

Reading Activities

1)	Reading labels on the bottles and jars that are used for storing food item	A	B	C	D	E	F	G	H
2)	Reading recipes from the cook book / Magazines / recipe booklets	A	B	C	D	E	F	G	H
3)	Reading instructions written on the food packets, tins, bottles etc. for food preparation	A	B	C	D	E	F	G	H
4)	Reading the gradations on the control knobs of ovens / mixer / gas range	A	B	C	D	E	F	G	H

Other Activities

1)	Cleaning of kitchen platform	A	B	C	D	E	F	G	H
2)	Thorough cleaning of kitchen sink	A	B	C	D	E	F	G	H
3)	Cleaning of outer surface of the refrigerator	A	B	C	D	E	F	G	H
4)	Removing of cobwebs in the kitchen	A	B	C	D	E	F	G	H
5)	Sprinkling insecticide in the nooks and corners of the kitchen	A	B	C	D	E	F	G	H

NOTE : If you find some important activity of the kitchen is missing in the above list, you are kindly requested to add on to the existing list.

	RING-A				RING-B				RING-C				RING-D			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

[illegible]

IV. 2 Kitchen - related activities as equated with the selected test objects on landolt's ring test

Test object 'A'

1. Sieving of flour
2. Kneading of dough
3. Boiling of milk

Test object 'B'

1. Measuring of quantity of ingredients required for food preparation.
2. Removing of rotten parts or unhealthy stains while cutting fruits and vegetables
3. Inspecting the readiness of food item being processed in the mixer / grinder / blender
4. Sauting onions till they reach golden brown colour
5. Assessing the colour of food items when they are being fried eg. 'batata wada', 'bhajia'

Test object 'C'

1. Inspection of insects while cutting vegetables like beans, peas, cauliflower, brinjal
2. Roasting 'rawa' till it is light brown in colour
3. Cleaning of glass bottles with long handled brush
4. Thorough cleaning of kitchen sink
5. Sprinkling insecticide in the nooks and corners of the kitchen

Test object 'D'

1. Cleaning of leafy vegetables - sorting out unwanted/rotten leaves and stalks from leafy vegetables like fenugreek, coriander, amarnath, mint, etc.
2. Carving of vegetables / fruits in fancy designs for salads
3. Assessing the food items being cooked for its crispness / consistency / doneness
4. Garnishing the ready - to - serve food in attractive colour combination
5. Cleaning of the jar of a mixer and its blades
6. Cleaning of the joints / screws that are located between the handle and the body of the pan
7. Cleaning of small kitchen tools for chopping and churning
8. Reading recipes from the cook book / magazines / recipe booklets
9. Reading instructions written on the food packets, tins, bottles etc. for food preparation
10. Reading the gradations on the control knobs of ovens / mixer / gas range

Test object 'E'

1. Sorting out waste particles, eg. stones, inferior quality seeds, insects, etc., from grains like rice and 'dal'
2. Cake icing
3. Cleaning of water glasses having intricate cut work
4. Cleaning of a manual citrus juicer
5. Cleaning of gas burner and its finer parts
6. Reading labels on the bottles and jars that are used for storing food item

Test object 'F'

1. Sorting of small white insects from 'rawa'
2. Inspecting the quality of grains / 'masalas'
3. Assessing the purity of water been used for cooking / drinking

Test object 'G'

1. Cleaning of mould with different sizes of 'jalis, for making 'chakli', 'Sev', etc.

Test object 'H'

1. Cleaning of like 'jeera', sesame (til) mustard seeds (rye), 'ajwain'

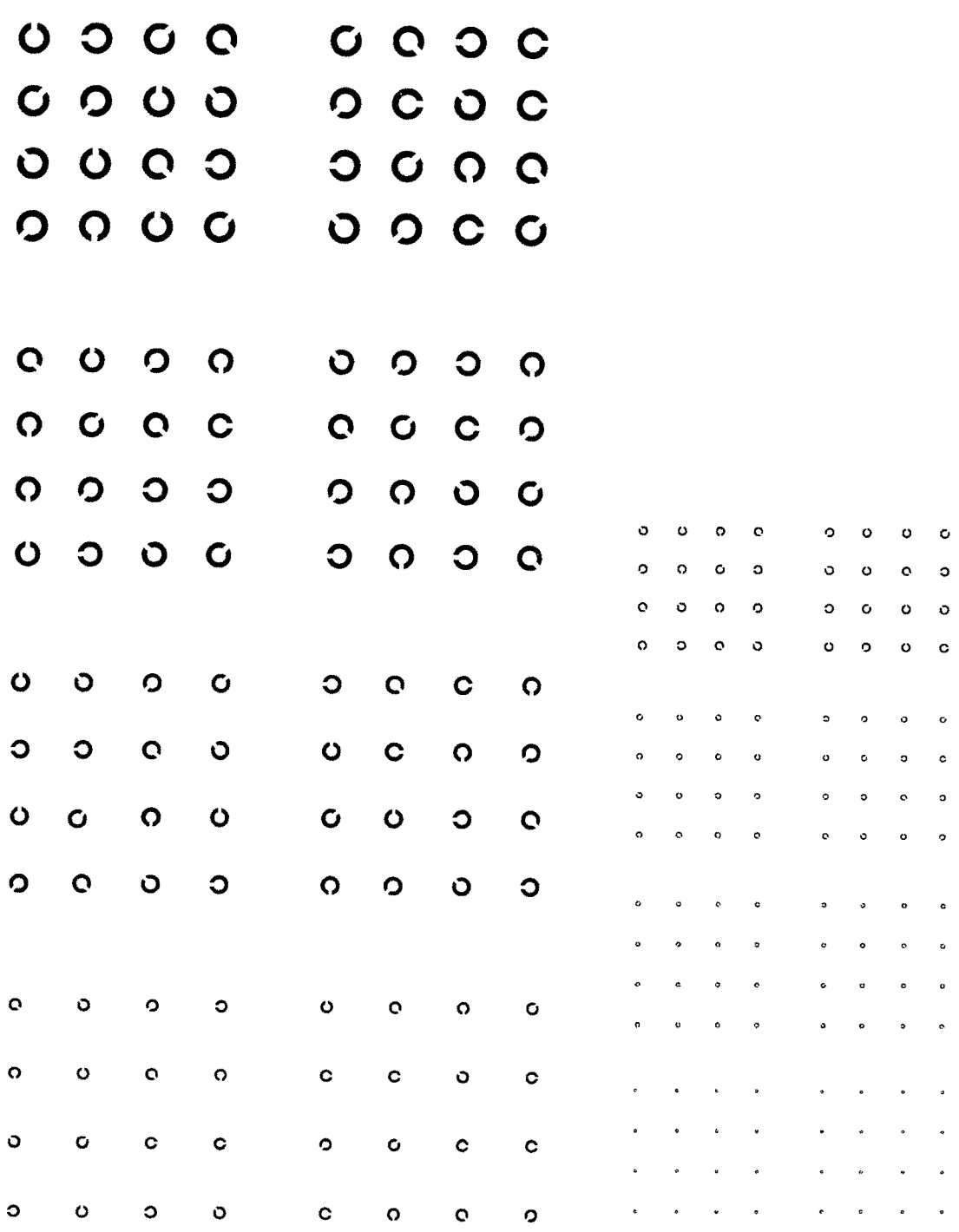
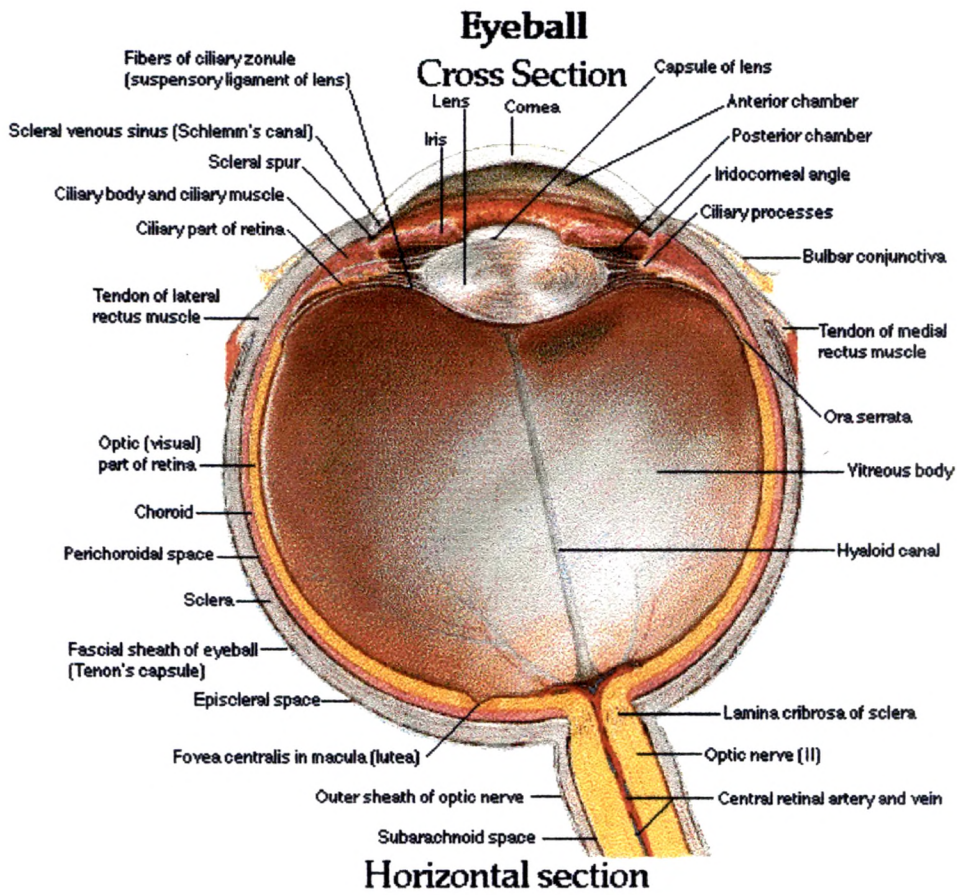


PLATE 8 : STANDARD VISUAL ACUITY TEST
(LANDOLT'S RING TEST)



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PLATE 9 : HORIZONTAL CROSS SECTION OF A HUMAN EYE

IV.3 Subjective assessment of Visual Comfort

Name of the Subject _____

Experiment No.

Age _____

Eye condition Left _____

Right

INSTRUCTION

You are requested to give an unbiased assessment of the lighting condition under which you had just worked.

- I When you entered the kitchen you found the lighting environment to be,

☐ Extremely pleasant

☐ Pleasant

☐ Neutral

☐ Unpleasant

☐ Extremely unpleasant

II While carrying out the tests in the kitchen you found the lighting conditions to be,

☐ Very comfortable

☐ Comfortable

☐ Neutral

☐ Uncomfortable

☐ Very uncomfortable

III You found the light at the work area to be,

☐ Excessively bright

☐ Bright

☐ Neither bright nor dim / uncertain

☐ Dim

☐ Excessively dim

IV The amount of light available at the work area was,

☐ Excessively high

☐ Adequate

☐ Neither adequate nor inadequate / uncertain

☐ Inadequate

☐ Excessively low

V While carrying out the various tests at the work area what degree of glare sensation did you experience ?

☐ No glare

☐ Glare which is just perceptible

☐ Glare which is annoying but just acceptable

☐ Glare which is just uncomfortable

☐ Glare which is just intolerable

VI While performing the tests at the work area, there was,

☐ No shadow

☐ Shadow which is just perceptible

☐ Soft shadow

☐ Medium shadow

☐ Sharp shadow

IV.4 Assessment of Visual Capabilities

The visual capability, in terms of accurateness of near and distant vision of the subjects was determined by means of a clinical examination of the eye by an ophthalmologist.

The Ishihara series of plates comprising of eight plates, each printed with a large number of variously sized disc - shaped patches of colour were used to assess colour vision of subjects. The colours used on different plates are those which are confused by persons having different anomalies of colour vision, and the patches of colour are ingeniously disposed to form definite patterns, such that the design seen by colour defectives differ from that which is apparent to persons having normal colour vision (Hunn, 1961 and Weston, 1962). As the appearance of colours is affected by the intensity of light illuminating them, the subjects were made to view the plates at a distance not exceeding 30" under artificial illuminance of 500 lux.

Assessment of Visual Skills

Efficiency in performing visual task depends not only in the presence of adequate visual capabilities but also in making good use of them. It has been found that analytical observation tests are useful in sorting persons according to their examining ability (Weston, 1962). It was thought appropriate to deal with observation screening tests to assess the visual skills of the subjects. Thus for the present study the subjects were screened for their observation power and rate of visual perception with the aid of the following two set of tests.

1. Test for Assessing the Observation Power

A series of four observation tests (Weston 1949 and 1962) was carried out in which the subject was instructed to look at the sample shown in the top right - hand corner of each diagram, then to examine all the objects and strike out those which were not identical with the sample. The first test in this series was a very simple one and was used as a buffer to familiarise the subject with what she was expected to do. It was not taken

into account in rating her as an observer while the results of other three tests were scored for grading subjects as observers. The test was carried out under an illuminance of 500 lux.

Scoring Performance on the Test

For each of the diagram in the series of tests, number of objects not identical with the sample was identified by the subject. A score of 2 was given for every correct answer and 1 for incorrect answer, in a way that the score for each of the series ranged between 3 to 6.

2. Test for Assessing the Rate of Visual Perception

A visual test was conducted that would distinguish "fast" and "slow seers" and also those having high and low level of accuracy in their performance of visual task. The test consisted of a sheet of white paper printed with suitable number of landolts rings in medium size. A total of 256 rings were arranged in 16 square blocks, each block containing 16 rings. The gap in each ring was positioned in any one of the eight directions and was meant to be viewed at a distance of 12 inch (Weston, 1949 and 1962).


The subject was instructed to read the diagram as if she were checking a printer's proof, and to strike out all the rings having the gap in North - East position. The illumination on the test sheet was kept at a level of 500 lux. The amount of time taken by each subject to complete the test was recorded.

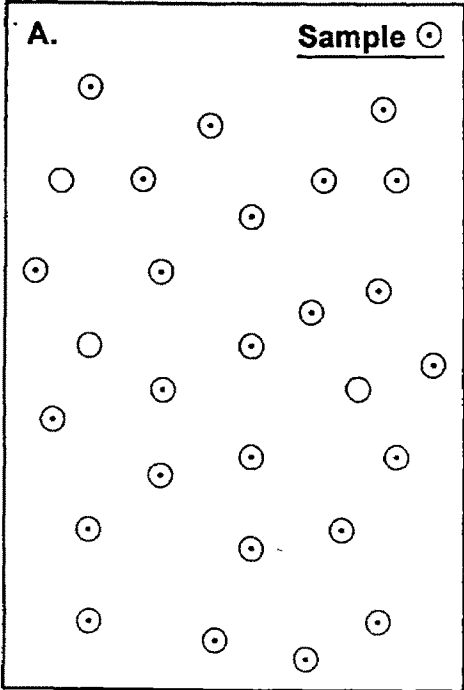
Scoring on the Test

Each correctly marked ring earned a score of 1 and incorrectly marked one a score of 'zero'. The total score that could be attained by the subject equal 32.


INSTRUCTIONS : You are provided with four blocks - A, B, C and D. On the right hand top corner of each block a sample figure is given. Identify the number of figures in each block that do not resemble the given sample.

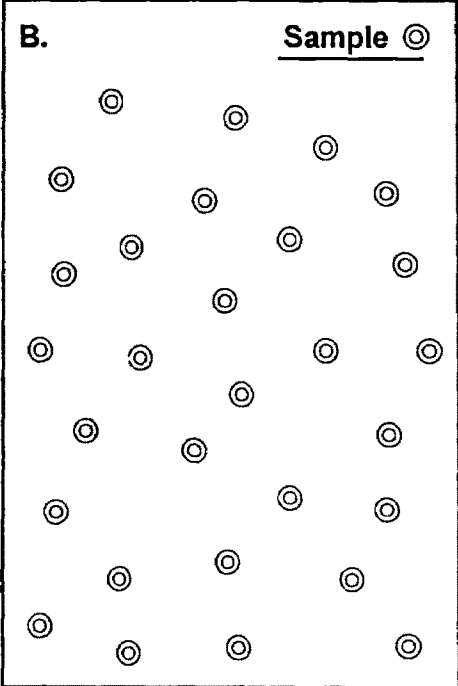
A.

Sample 




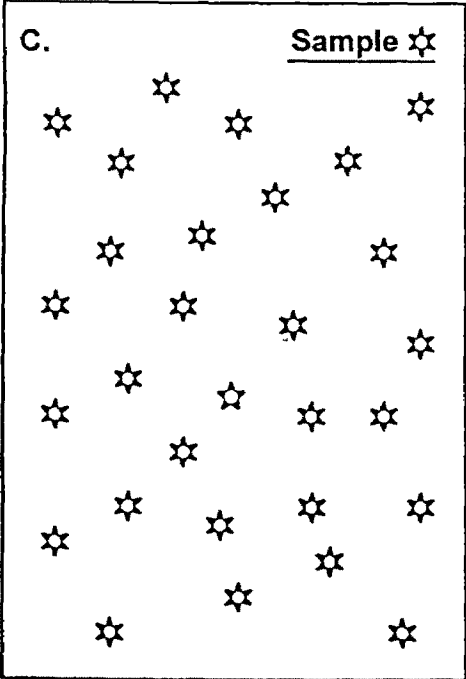
B.

Sample 




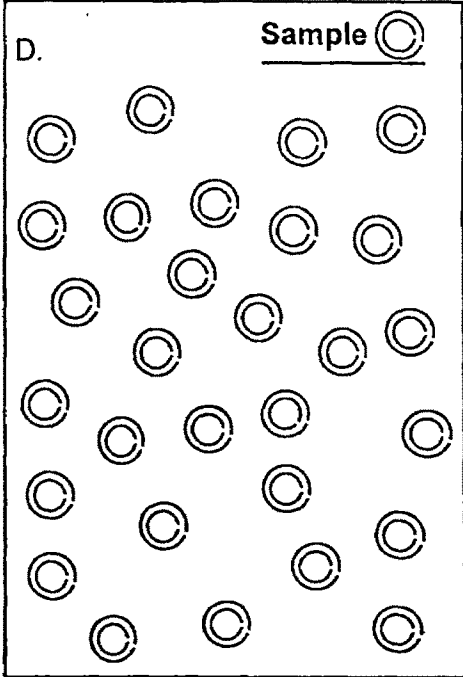
C.

Sample 



D.

Sample 



A _____

B _____

C _____

D _____

NAME : _____ AGE : _____

EYE SIGHT : LEFT _____ RIGHT _____

☐

☐

☐

☐

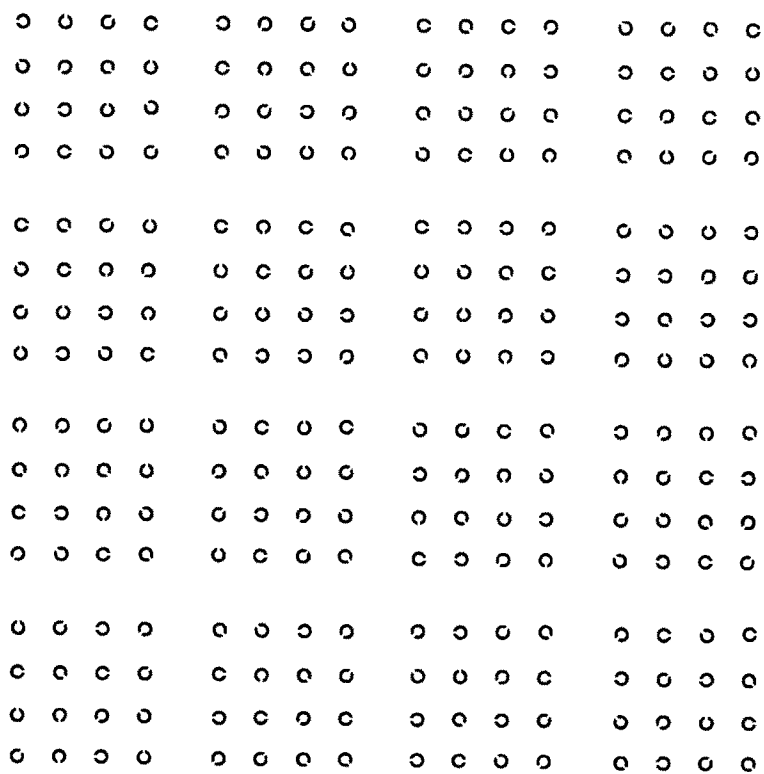


PLATE II : TEST OF PLATE OF VISUAL PERCEPTION