Towheed Iranian School
(International Section)
First Term, Final Exams, 2015-2016

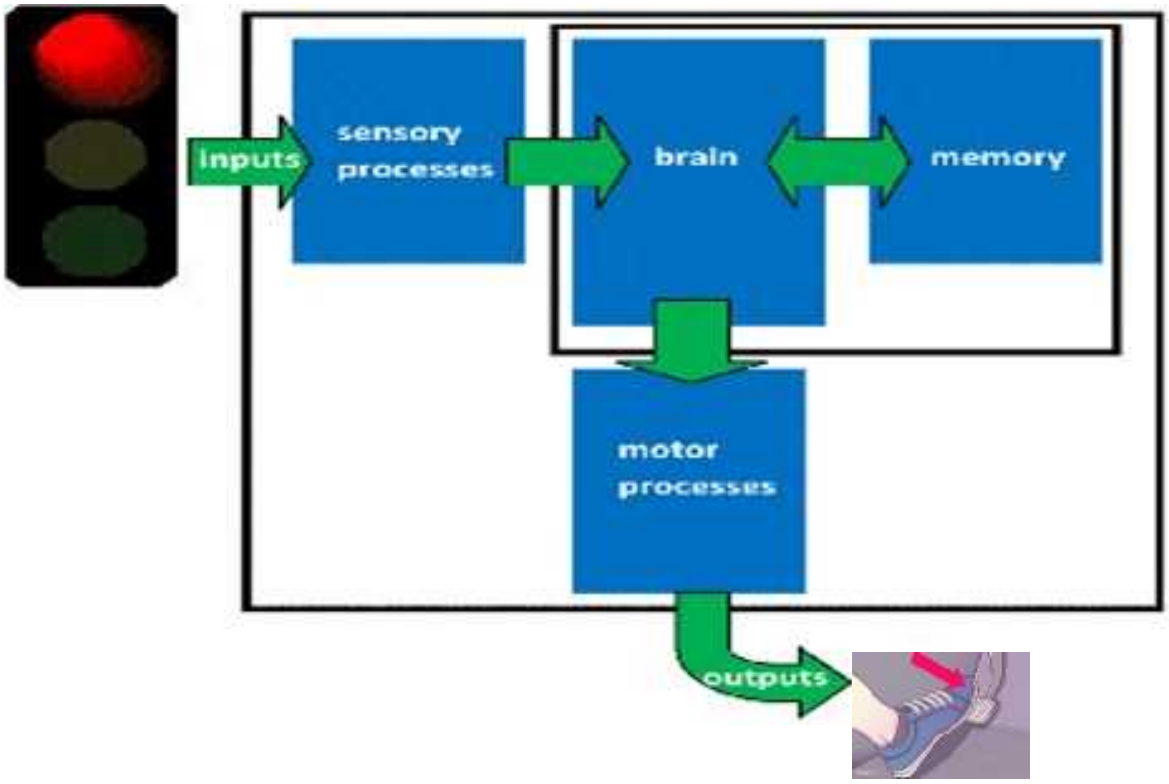
Subject: Design Technology **Date: 16/12/2015**

Name: _____ **Grade: 11 IB , Boys, Girls**

Mark	
28	*7*

1. The figure below shows the human information-processing system in operation when a car is being driven.

Human information-processing system



(a) State which part of the human information-processing system is represented by a physiological action.**(1)**

.....

(b) Describe the sensory process in the human information-processing system.**(2)**

.....

(c) Explain the function of memory in the human information-processing system.**(3)**

.....

.....

.....

2. What is the advantage of using freehand drawings in the design process?**(1)**

A. They are quick to produce and can be used for design development.
B. They can be used as working drawings for design realization.
C. They show details and dimensions and can be used for production.
D. They show the sequence of assembly of a product.

3. Which scale would be used for a prototype?**(1)**

A. 1:1
B. 1:10
C. 1:100
D. 1:1000

(Answeronly one question; either question 4a or 4b)

4. a) Describe why mapping is an important consideration in human factors design.**(2)**

.....
.....

4. b) Describe **one** reason why a designer would use an appearance prototype at the design development stage of a product.**(2)**

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.....

5. Outline why a comfort rating scale of 1–10 is an ordinal scale**.** **(1)**

.....

(Answer only one question; either question 6a or 6b)

6. a) Which percentile needed for designing of the following items:**(3)**

a) an aeroplane cockpit
b) cinema seats
c) cycle helmet
d) washing machine

6. b) Find the percentile of 179 in the following set of students' heights.**(3)**

176, 180, 165, 169, 174, 185, 190, 168, 179, 170, 181, 184

7. Give a short definition of: (define only 5)**(5)**

a) Dynamic data: .....

b) Clearance: .....

c) Alertness: .....

d) Physical ergonomics: ……..

e) Biomechanics: ……..

f) Scale model: .....

g) Fidelity: .....

8. List different kinds of conceptual models?**(2)**

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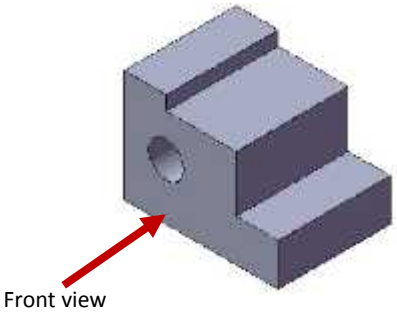
.....

9. Draw the third angle projection of the following object. **(4)**



10. Compare the Top down and bottom up modeling of CAD strategies. State that which one is used more in reality?**(3)**