

## Graduate Diploma in Systems Analysis (GDipSA)

### Aptitude Test Sample

All GDipSA applicants are required to sit for the aptitude test. This is a test to measure your aptitudes for learning and performing the job of computer programming and systems analysis. There are four parts to the test and each part will be timed separately – Diagram Ability, Reasoning, Number Ability, and English Language Ability. It is designed to test your problem-solving ability, your ability to read and understand diagrams, etc. You can't really study for the test. It is designed to test what abilities you have, as opposed to testing what facts or information you know. Total 50 multiple choice questions and the duration of the test is 1 hour.

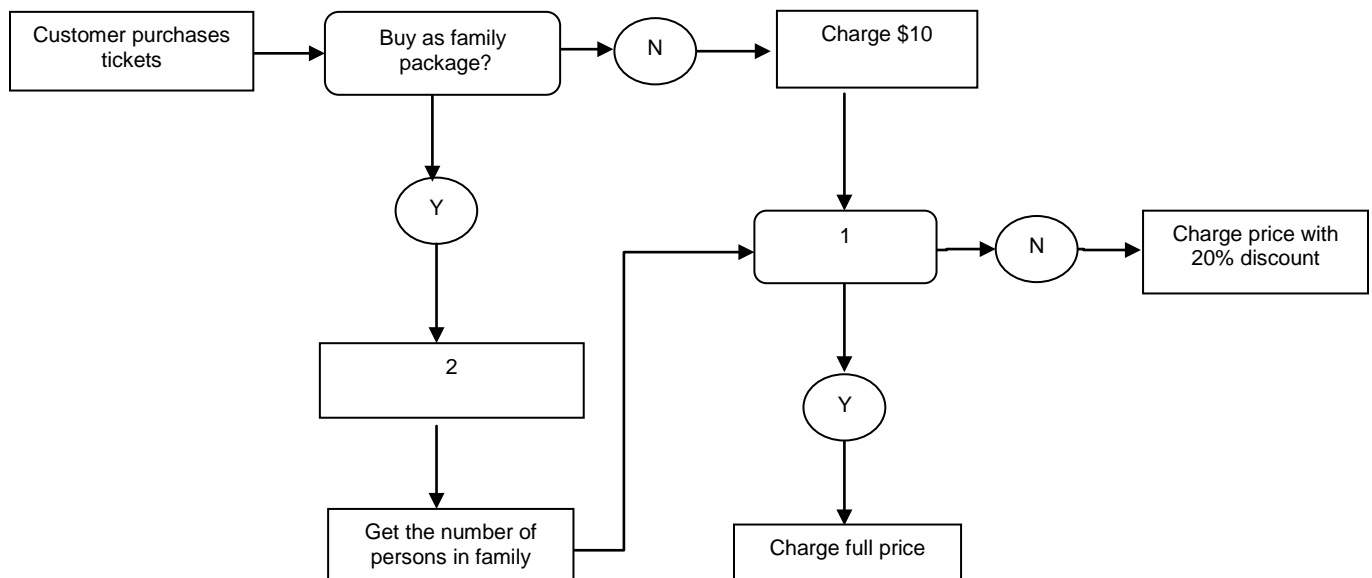
### Sample Questions

#### Diagramming [10 Marks]

##### Question 1 - 10

In this section there are a number of problems with flow charts (schematic diagrams) that illustrate the process by which each problem is solved. The solution to a problem is illustrated in its diagram by following the arrows from cell to cell.

Sample question 1:



Problem and conditions

- A. A themepark has decided to charge their entrance fee by individual or family package.
  - As individual, ticket will be sold at \$10 per person
  - As family, ticket will be sold at \$8 per person
- B. There is also a difference in the fee based on the entry time into the park.
  - Entry to theme park before noon will be charged at the full price
  - Entry to theme park after noon will be charged the normal price with a 20% discount

**Cell 1.**

- A. Is the entry before noon?
- B. Is the entry after noon?
- C. Customer purchases individual ticket
- D. Customer purchases a family package
- E. Customer makes payment

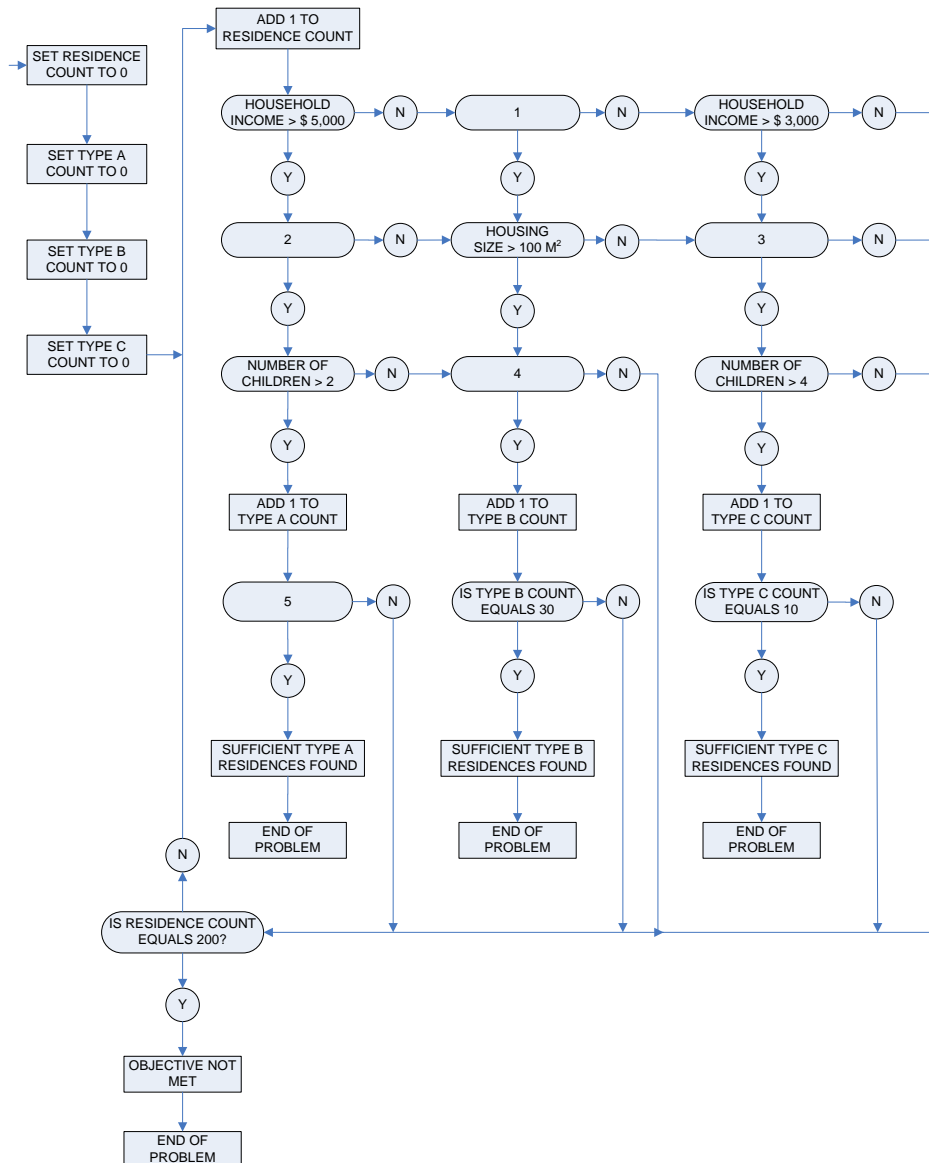
**Answer: (A)**

**Cell 2.**

- A. Charge \$10 per person
- B. Charge \$10 with 20% discount per person
- C. Charge \$8 per person
- D. Customer makes payment
- E. Check the time of entry

**Answer: (C)**

**Sample question 2:**



**Problem and conditions for Drawing 1**

- A. 200 Residences are randomly drawn from a pool of 5000 Residences.
- B. The objective is to get a group of residences of any Type (A, B or C) of a certain quantity.
- C. Acceptance Criteria for various types of residences are as follows:

Variable	Type A	Type B	Type C
Household Income	> \$5,000	> \$4,000	> \$3,000
Housing Size	> 120 m <sup>2</sup>	> 100 m <sup>2</sup>	> 90 m <sup>2</sup>
Number of Children	> 2	> 1	> 4
Quantity Required	20	30	10

- D. A residence can be classified as more than one Type. (ie a Residence could be Type A as well as Type C). However the selection criteria require the residence to be of a single type. An order of preference is therefore used to select the final type for such Residences. The order of preference is classified as follows:
1. Type A
  2. Type B
  3. Type C

In other words, a residence having both Type A and C will be considered having a type of Type A.

**Cell 1**

- A. Household Income > \$ 5,000?
- B. Household Income > \$ 4,000?
- C. Household Income > \$ 3,000?
- D. Residence is not Type A?
- E. Residence is not Type B?

**Answer: (B)**

**Cell 2**

- A. Household Income > \$ 5,000?
- B. Household Income > \$ 4,000?
- C. Household Income > \$ 3,000?
- D. Housing Size > 100 m<sup>2</sup>?
- E. Housing Size > 120 m<sup>2</sup>?

**Answer: (E)**

**Cell 3**

- A. Housing Size > 80 m<sup>2</sup>?
- B. Housing Size > 90 m<sup>2</sup>?
- C. Housing Size > 100 m<sup>2</sup>?
- D. Household Income > \$ 3,000?
- E. Household Income > \$ 4,000?

**Answer: (B)**

**Cell 4**

- A. Number of Children  $> 1$ ?
- B. Number of Children equals 1?
- C. Number of Children  $> 2$ ?
- D. Number of Children equals 2?
- E. Number of Children  $> 3$ ?

**Answer: (A)**

**Cell 5**

- A. Is Type A Count equals 10?
- B. Is Type B Count equals 20?
- C. Is Type C Count equals 30?
- D. Is Type A Count equals 20?
- E. Is Type B Count equals 30?

**Answer: (D)**

**Reasoning [15 Marks]****Question 11-25**

This is a test of your ability to reason and to express problems in a simple form using conventional mathematical symbols. The items in the test require you to read a problem and formulate an answer for it.

*Sample question 1: A new homeowner ordered an air-conditioning system which costs A dollars, six wardrobes which cost W dollars a piece, and a dozen beds which cost B dollars each. The total cost of the order is*

- A.  $A + W + B$
- B.  $AB + 6W$
- C.  $A + 6W + 12B$
- D.  $A + (W + B) / 2$
- E.  $A + (2W + B)6$

**Answer: (C)**

*Sample question 2: S dollars are divided amongst 3 persons, so that the first person receives \$20 less than the second person, and the second person receives \$20 less than the third person. What does the last person receive?*

- A.  $S - 60$
- B.  $S - 40$
- C.  $S/3 - 20$
- D.  $S/3 + 20$
- E. None of the above

**Answer: (D)**

*Sample question 3: When a shipment of eggs was received, it was found that  $R$  eggs out of the total of  $P$  eggs were broken. Which of the following expressions indicates the percent of the eggs that were unbroken?*

- A.  $R \cdot 100 / P$
- B.  $P / R$
- C.  $P/R \cdot 100$
- D.  $(P-R) \cdot 100 / P$
- E.  $P + R$

**Answer: (D)**

*Sample question 4: In a box containing  $Z$  pens,  $S$  pens contain red lead and the rest contain blue lead. Which of the following expressions indicates the percent of the pen containing blue lead?*

- A.  $[100(Z - S)] / Z$
- B.  $100 - (Z / S)$
- C.  $S / (Z - S)$
- D.  $(Z - S) / (Z + S)$
- E.  $100S / (Z - S)$

**Answer: (A)**

### **Number Ability [15 Marks]**

#### **Question 26- 40**

This test measures your ability to make rapid numerical calculations and estimates.

*Sample question 1:  $123.4 \div 1/10$  (approximate)*

- A. 1.2
- B. 12
- C. 120
- D. 1200
- E. 12000

**Answer: (D)**

*Sample question 2: 40% of 645 (approximate)*

- A. 230
- B. 260
- C. 25
- D. 269
- E. 250

**Answer: (B)**

*Sample question 3:  $13.5 + 49.4 - 35.2$*

- A. 72.20
- B. 27.70
- C. 37.20
- D. 17.40
- E. 2.77

**Answer: (B)**

*Sample question 4:  $4/7 \times 3.90$*

- A. 0.222

- B. 22.22
- C. 2.228
- D. 222.2
- E. 2.222

**Answer: (C)**

Sample question 5:  $(36/9 + 16) / (5 \times 5 - 20)$

- A. 40
- B. 0.4
- C. 0.44
- D. 44
- E. 4

**Answer: (E)**

### English Language Ability [10 marks] Question 41 – 50

Read the following passage and answer the questions below.

Oct 9, 2009

JewelFest still dazzles

WITH recent signs that the economy is picking up, fair organisers and exhibitors are **optimistic about sales** at their events starting this weekend.

The organiser of the seventh JewelFest, which opens today and runs until Oct 18, expects to see sales increase from last year's \$10 million to \$12 million this year.

Some 36 exhibitors will showcase \$120 million worth of gems at Ngee Ann City Civic Plaza, **up from 33 exhibitors and \$100 million worth of gems last year.**

A four-day car exhibition, the inaugural Asia AutoSalon 2009, opened yesterday at Singapore Expo. About 50,000 visitors are expected at the event, with sales of at least \$1 million.

It features more than 100 models from more than 50 exhibitors. Both organisers **cited the improved economy as the reason for their bullish outlook.** . -- MY PAPER

Sample question 1: "optimistic about sales" shows that

- A. the organisers and exhibitors have lack of confidence
- B. the organisers and exhibitors are by nature a group of cheerful people
- C. the organisers and exhibitors are full of confidence
- D. the organisers and exhibitors are expecting less people to the exhibitions
- E. the organisers and exhibitors are unhappy with their sales

**Answer: (C)**

Sample question 2: "cited the improved economy as the reason for their bullish outlook" can be best replaced by

- A. explained that their bullish outlook is due to the improved economy
- B. felt that their bullish outlook is the reason for the improved economy
- C. indicated that the improved outlook is due to the good economy
- D. agreed that good economy contributes to their bullish outlook
- E. presented that the economy has improved and that their outlook is bullish

**Answer: (A)**

*Sample question 3: "up from 33 exhibitors and \$100 million worth of gems last year" implies that*

- A. last year there were more exhibitors than this year*
- B. last year there were less exhibitors than this year*
- C. last year there were more sales than this year*
- D. last year there were more customers than this year*
- E. last year there were more gems than this year*

*Answer: (B)*