



April 2014

Fundamental IT Engineer Examination (Afternoon)

Answers and Marks(in blue)

Q1

Subquestion

3 A e)

1
0
1
0

3 B b) $2 \times S_1 + S_0$

3 C a) $(\neg S_1 \& \neg S_0 \& I_0) \mid (\neg S_1 \& S_0 \& I_1) \mid (S_1 \& \neg S_0 \& I_2) \mid (S_1 \& S_0 \& I_3)$

3 D d) $S_1 \& \neg S_0 \& F$

Q2

Subquestion 1

3 A e) Customer

3 B h) Return videos

2 C a) « extend »

Subquestion 2

2 D a) 0..* 1

2 E e) 1 1

Q3

Subquestion 1

2 A b) Job_status = 4

2 B c) Rank_type = 1

(Note) Answers for A and B can be exchanged.

Subquestion 2

2 C b) COUNT(*) SO, 0 SN

2 D b) IS NULL

2 E f) UNION ALL

2 F a) 0 SO, COUNT(*) SN

Q4

Subquestion 1

2 e) | Header | Body | SMTP Sender | SMTP Receiver |

Subquestion 2

2 A b) DATA

2 B f) Send message

2 C d) QUIT

Subquestion 3

2 D c) 5

2 E b) 4

Q5

Subquestion 1

- 2 A d) `IncomeToAssessTax > 500`
- 2 B e) `AllocatedIncome[i+1] ← AllocatedIncome[i] - Amount[i]`
- 2 C b) `AllocatedIncome[i] ← Amount[i]`
- 2 D c) `i < 12`

(Note) Answers for B and C can NOT be exchanged.

Subquestion 2

- 2 E d) (2)
- 2 F b) $(\text{IncomeTaxPerYear} + 6) \div 12$

Q6

Subquestion 1

- 3 A d)

0	1	1	1
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- 4 B b) `Points[i].c > Points[j].c`
- 4 C d) `Points[i].s`
- 3 D c) `n`
- 3 E b) `Active[i] = 1`

Subquestion 2

- 3 F d) with the maximum right-end coordinate

Q7

Subquestion 1

- 3 A e) `(u >= 0) && (v >= 0) && (u + v <= 1)`
- 3 B a) `in_triangle(list_P[i], list_T[j])`

Subquestion 2

- 2 C c) `dot00 * dot11`
 - 2 D d) `dot01 * dot01`
- (Note) Answers for C and D can be exchanged.

Subquestion 3

- 4 E e) `triangle_list[triangle_cnt] = j`
- 3 F f) 5
- 3 G b) 1

Q8

Subquestion 1

- 3 A e) `playBestMove()`
- 3 B d) `squares[row][column] = 'o'`
- 3 C b) `minimaxForO()`
- 4 D e) `squares[row][column]`
- 3 E b) `squares[bestRow][bestColumn]`

Subquestion 2

- 4 F b) row 0, column 2