Analtical Questions

①

i) $(2020)_{10}$ to $(\quad)_{16}$

16 | 2020
16 | 126 — 4
7 — 14

$= (7144)_{16}$

$= (7E4)_{16}$

ii) $(2020.65625)_{10}$

16 | 2020
16 | 126 — 4
7 — 14

$= (7E4)_{16}$

$0.65625 \times 16 = 10.5$

$0.5 \times 16 = 8$

$= (.08)_{16}$

$= (.A8)_{16}$

$(2020.65625) = (7E4.A8)_{16}$

iii) $(172)_{10}$ to $(\quad)_{16}$

16 | 172
10 — 12

$= (10\,12)_{16}$

$= (AC)_{16}$

iv) $(172.983)_{10}$

16 | 172
10 — 12

$= (AC)_{16}$

$0.983 \times 16 = 15.72$

$0.72 \times 16 = 11.5$

$0.5 \times 16 = 8$

$= (15\,11\,8)_{16}$

$= (D98)_{16}$

$(172.983)_{10} = (AC.D98)_{16}$

② $(49)_{10}$ to $(\quad)_{16}$

16 | 49
3 — 1

$= (31)_{16}$

③ $(112810)_{10}$ to $(\quad)_{16}$

16 | 112810
16 | 7050 — 10
16 | 440 — 10
16 | 27 — 8
1 — 11

$(1\,11\,1010)_{16}$

$= (1B8AA)_{16}$

④ $(60010)_{10}$ to $(\ )_{16}$

16 | 60010
16 | 3750 – 10
16 | 234 – 6
16 | 14 – 10

$(1410610)_{16}$

$=(EA6A)_{16}$

⑤ $(1542)_{10}$ to $(\ )_{16}$

16 | 1542
16 | 96 – 6
6 – 0

$(606)_{16}$

⑥ Hexa decimal equivalent of $(175)_{10}$

16 | 175
10 – 15

$(1015)_{16}$ $=(AF)_{16}$

⑦ i) $(105)_{10}$ to $(\ )_{16}$

16 | 105
6 – 9

$(69)_{16}$

ii) $(450)_{10}$ to $(\ )_{16}$

16 | 450
16 | 28 – 2
1 – 12

$(1122)_{16}$ $=(1C2)_{16}$

iii) $(199)_{10}$ to $(\ )_{16}$

16 | 199
12 – 7

$(127)_{16}$

$=(C7)_{16}$

iv) $(3000)_{10}$ to $(\ )_{16}$

16 | 3000
16 | 187 – 8
11 – 11

$(11118)_{16}$

$=(BB8)_{16}$

(8) i) $(1032)_{10}$ to $(\ )_8$

8 | 1032
8 | 123 - 2
8 | 16 - 1
8

$(2012)_8$

ii) $(1032.6875)_{10}$ to $(\ )_8$

8 | 1032
8 | 123 - 2
8 | 16 - 1
8

$=(2012)_8$

$0.6875 \times 8 = 5.5$

$0.5 \times 8 = 4$

$=(54)_8$

$(1032.6875)_{10} = (2012.54)_8$

iii) $(172)_{10}$ to $(\ )_8$

8 | 172
8 | 21 - 4
2 - 5

$=(254)_8$

iv) $(172.878)_{10}$ to $(\ )_8$

8 | 172
8 | 21 - 4
2 - 5

$=(254)_8$

$0.878 \times 8 = 7.02$

$0.2 \times 8 = 1.6$

$0.6 \times 8 = 4.8$

$(71)_8$

$= (254.71)_8$

(9) $(127)_{10}$ to $(\ )_8$

8 | 127
8 | 15 - 7
1 - 7

$(177)_8$

⑩ IP class address.

i) 10.250.1.1 = class a.

ii) 193.42.1.1 = class C.

iii) 249.240.80.78 = class E.

iv) 215.45.45.0 = class C.

v) 33.0.0.0 = class a.

vi) 158.98.80.0 = class b.

Rules:

class A = 0-126

class B = 128-191

class C = 192-223

class D = 224-239

class E = 240-254.