IBPS RRB OFFICER SCALE I - PRACTICE SET
Answers with Explanation

Reasoning

1. (e) T R A N S P A R E N C Y
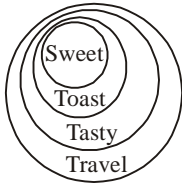
(2-5) :

Age	Year	People
39	1982	H
37	1984	B
34	1987	C
31	1990	F
30	1991	G
25	1996	D
20	2001	A
13	2008	E

ACHIEVERS In Focus

2. (b) 3. (c)   4. (e)   5. (e)

6. (a)

Sweet
Toast
Tasty
Travel

ACHIEVERS In Focus

7. (e)

Bowler — Boy — Cricketer
Batsman

8. (a)

Tea Coffee Cold
Summer
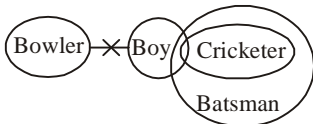
9. (c)

(10-13) : ACHIEVERS In Focus

E
H   L
K   G
M   I
F
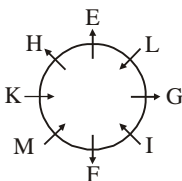
10. (d) 11. (a)   12. (d)   13. (d)

(14-16) :

U —10 m— Q —15 m— S
20 m   20 m
T —15 m— R
20 m   20 m
V —15 m— P
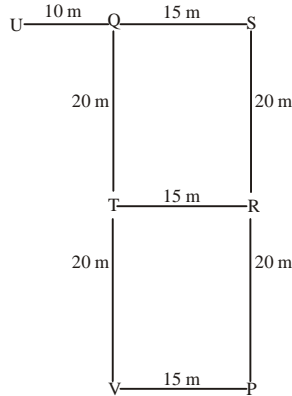
14.(d) 15. (a)   16. (c)

(17-19) :

B > D > A > F > C(56) > E

17. (c) 18. (b)   19. (d)

(20-21):

G(+) ═══ A(−) ──── S   N(+) ═══ D(−)
| |
J(+) ──── K(−) ──── M(−) ═══ V(+)
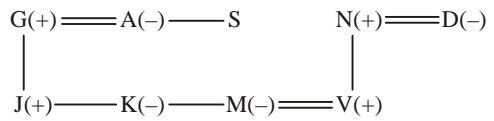
20.(c)   21. (b)

(22-24): ACHIEVERS In Focus

Word	Code
temple	mn
pretend	ie
station	as
vote	bn
time	cd
trust	zq
case	st
friend/run	zx/yx

22. (d) 23. (e) 24. (d)

(25-28) :

Floor	Person	Banks
7	Q	PNB
6	U	HDFC
5	B	SBI
4	T	BOM
3	P	BOI
2	D	ICICI
1	X	RBL

ACHIEVERS In Focus

25. (c) 26. (b)   27. (c)   28. (a)

(29-32) :

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        S   P   R   Q   T
Row 2 ──┬───┬───┬───┬───┬──    ACHiEVERS In Focus
        ↓   ↓   ↓   ↓   ↓
Row 1 ──┴───┴───┴───┴───┴──
        ↑   ↑   ↑   ↑   ↑
        D   E   A   C   B
```
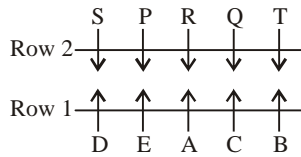
29. (a)   30. (d)   31. (b)   32. (c)

33. (d)   34. (d)   35. (a)   36. (d)

37. (a)   38. (d)   39. (c)

40. (b)

Quantitative Aptitude

1. (a) Total rejected applications in the year 2012

$$= 15 \times \frac{20}{100} = 3 \text{ lakh}$$

Total accepted applications in the year 2014

$$= 25 \times \frac{76}{100} = 19 \text{ lakh}$$

Required ratio = 3 : 19

2. (d) Total rejected applications in the year 2014

$$= 25 \times \frac{24}{100} = 6 \text{ lakh}$$ ACHiEVERS In Focus

Total accepted applications in the year 2015

$$= 28 \times \frac{85}{100} = 23.8 \text{ lakh}$$

Required percentage $= \dfrac{23.8 - 6}{23.8} \times 100$

$= 74.78 \approx 75\%$

3. (c) Total accepted applications in the year 2013

$$= 18 \times \frac{82}{100} = 14.76 \text{ lakh}$$

Total accepted applications in the year 2016

$$= 32 \times \frac{90}{100} = 28.8 \text{ lakh}$$

Required average $= \dfrac{14.76 + 28.8}{2}$

$= \dfrac{43 - 56}{2} = 21.78 \text{ lakh}$

4. (b) Total applicants appeared in the year 2013

$$= 18 \times \frac{82}{100} \times \frac{3}{4} = 11.07 \text{ lakh}$$

Total applicants appeared in the year 2015

$$= 28 \times \frac{85}{100} \times \frac{4}{5} = 19.04 \text{ lakh}$$ ACHiEVERS In Focus

Total appeared applicants = 11.07 + 19.04 = 30.11 lakh

Required percentage $= \dfrac{30.11}{18 + 28} \times 100 \approx 65\%$

5. (c) A + B + N = 35 × 3 = 105

A + B + N + D + K = 41 × 5 = 205

D + K = 205 – 105 = 100 — (a)

K – D = 20 – (b)

K = 60 & D = 40   ACHiEVERS In Focus

6. (a) Let population in 2016 was x

$$x \times \frac{110}{100} \times \frac{110}{100} = 89540$$

x = 74000

7. (a) Required probability

$$= \left(\frac{^3c_1}{^7c_1} + \frac{^4c_1}{^7c_1} \right) \times \frac{1}{2}$$

$$= \frac{1}{2}$$

8. (b) Length of rectangle $(\ell) = \dfrac{176}{2 \times \frac{22}{7}} = 28$ cm

Breadth of rectangle (b) $= \sqrt{196} = 14$ cm

∴ Diagonal of rectangle $= \sqrt{28^2 + 14^2} = \sqrt{980}$ cm

$= 14\sqrt{5}$ cm

9. (c) Let initial quantity of milk and water in the mixture be 7y and xy respectively.

So,   ACHiEVERS In Focus

$$\frac{7y}{xy + 20} = \frac{7}{15}$$

105y = 7xy + 140 ......(i)

and

$$\frac{7y}{xy + 10} = \frac{14}{25}$$

175y = 14xy + 140 .....(ii)

Solving (i) and (ii) we get

y = 4

Initial quantity of milk in mixture = 7y = 28 L

10. (e) Let marked price of one jeans be 100x

So cost price of one jeans be 80x

ATQ,

12 × (87.5x – 80x) = 1800

7.5x = 150

x = 20

Cost price of one jeans = 80 × 20 = Rs. 1600

11. (a) (i) $4x^2 + 14x - 18 = 0$

$4x^2 + 18x - 4x - 18 = 0$

$2x(2x + 9) - 2(2x + 9) = 0$

$(2x - 2)(2x + 9) = 0$ ACHiEVERS In Focus

$x = 1, -\dfrac{9}{2}$

(ii) $y^2 + 12y + 35 = 0$
$y^2 + 7y + 5y + 35 = 0$
$y(y+7) + 5(y+7) = 0$
$(y+5)(y+7) = 0$
$y = -5, -7$
$x > y$

12. (b) (i) $4x^2 + 17x - 42 = 0$
$4x^2 + 24x - 7x - 42 = 0$
$4x(x+6) - 7(x+6) = 0$
$(4x - 7)(x + 6) = 0$
$x = \dfrac{7}{4}, -6$

(ii) $y^2 + 21y + 90 = 0$
$y^2 + 15y + 6y + 90 = 0$
$y(y + 15) + 6(y + 15) = 0$
$(y + 6)(y + 15) = 0$
$y = -6, -15$
$x \geq y$

13. (d) (i) $x^2 - 24x + 128 = 0$
$x^2 - 16x - 8x + 128 = 0$
$x(x-16) - 8(x-16) = 0$
$(x - 8)(x - 16) = 0$
$x = 8, 16$

(ii) $y^2 - 34y + 288 = 0$
$y^2 - 18y - 16y + 288 = 0$
$y(y - 18) - 16(y - 18) = 0$
$(y - 18)(y - 16) = 0$
$y = 18, 16$
$x \leq y$

14. (b)

15. (e) Profit of A : Profit of B : Profit of C
$= (20000 \times 12) : (30000 \times 4 + 40000 \times 8) : (40000 \times 9 + 30000 \times 3)$
$= 24 : (12 + 32) : (36 + 9)$
$= 24 : 44 : 45$
$\therefore$ Share of A $= \dfrac{24}{24 + 44 + 45} \times 84750$
$= 24 \times 750$
$= $ Rs.18000

16. (a) $\dfrac{30}{U} + \dfrac{44}{D} = 10$ ......(i)
$\dfrac{40}{U} + \dfrac{55}{D} = 13$ ......(ii)
Apply, (i) $\times 40 -$ (ii) $\times 30$
$\Rightarrow \dfrac{1760}{D} - \dfrac{1650}{D} = 400 - 390$
$\Rightarrow \dfrac{110}{D} = 10 \Rightarrow D = 11$ km/h
$\therefore U = 5$ km/h

Rate of current $= \dfrac{1}{2}(D - U) = 3$ km/h

17. (a)

18. (b) Work done in last 6 minutes $= 6 \times \left(\dfrac{1}{15} + \dfrac{1}{20} \right) = \dfrac{42}{60}$ units
Remaining work $= 1 - \dfrac{42}{60} = \dfrac{18}{60}$ units
Per minute work of A, B and C together
$= \dfrac{1}{15} + \dfrac{1}{20} + \dfrac{1}{30} = \dfrac{9}{60}$ units
Total no, of minutes $= \dfrac{\dfrac{18}{60}}{\dfrac{9}{60}} + 6 = 8$ minutes

19. (b) $\dfrac{65 \times 360}{100} - \dfrac{?}{100} \times 250 \approx 139$
$\Rightarrow 234 - \dfrac{25 \times ?}{10} \approx 139$
$\Rightarrow ? \approx \dfrac{95 \times 10}{25} = 38$

20. (a) $\sqrt{912 \div 24 + 184 - 53} \approx ?$
$\Rightarrow ? \approx \sqrt{169} = 13$

21. (c) $(15)^2 - (5)^3 + \sqrt{1521} + 9 \times 13 \approx (?)^2$
$\Rightarrow 225 - 125 + 39 + 117 \approx (?)^2$
$\Rightarrow ? \approx \sqrt{256} = 16$

22. (d) $(3416 \div 56) - (1134 \div ?) \approx 19$
$\Rightarrow 61 - \dfrac{1134}{?} \approx 19$
$\Rightarrow 42 \approx \dfrac{1134}{?}$
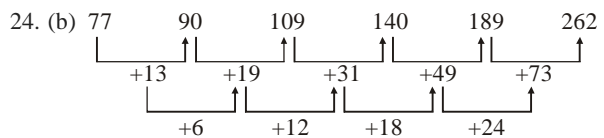$\Rightarrow ? \approx 27$

23. (e) Pattern is
$4 + 3^3 = 31$
$31 - 4^2 = 15$
$15 + 5^3 = 140$
$140 - 6^2 = 104$
$104 + 7^3 = 447$

24. (b) 77   90   109   140   189   262
+13   +19   +31   +49   +73
+6   +12   +18   +24

25. (a) Pattern is :
$91 + (2 \times 3) = 97$
$97 + (4 \times 5) = 117$
$117 + (6 \times 7) = 159$
$159 + (8 \times 9) = 231$
$231 + (10 \times 11) = 341$

26. (d) Pattern is :

$5 \times \frac{1}{2} + \frac{1}{2} = 3$

$3 \times 1 + 1 = 4$

$4 \times 2 + 2 = 10$

$10 \times 4 + 4 = 44$

$44 \times 8 + 8 = 360$

27. (d)   28. (d)

(29 – 32) :

Total no. of male employee in B = $\frac{23040}{32} = 720$

Number of female employees in B = $\frac{2}{3} \times 720 = 480$

Total number of employees in B = 720 + 480 = 1200

Number of employees in A = 1200 – 336 = 864

Number of male employees in A = $\frac{9}{16} \times 864 = 486$

Number of female employees in A = $\frac{7}{16} \times 864 = 378$

Number of female employees in C = 918 – 378 = 540

Number of male employees in C = $\frac{60}{100} \times 720 = 432$

Total number of employees in C = 432 + 540 = 972

29. (b) Required % = $\frac{486}{720} \times 100 = 67.5\%$

30. (a) Required difference = 432 – 378 = 54

31. (d) Number of male employees in D = $\frac{125}{100} \times 432 = 540$

Number of female employees in D

= 124 + 540 = 664

Required difference = (540 + 664) – 1200 = 4

32. (c) Number of male employees in E = 480 – 130 = 350

Number of female employees in E = $\frac{6}{7} \times 350 = 300$

33. (c) Let sum be P.

$P\left[\left(1 + \frac{8}{100}\right)^2 - 1\right] = 4451.2$

=> P = Rs. 26750

SI. = $\frac{26750 \times 5 \times 2}{100}$ = Rs. 2675

34. (b) Required difference

$= \left(\frac{3}{4} \times \frac{26}{100} \times 4600\right) - \left(\frac{3}{5} \times \frac{15}{100} \times 4600\right)$

= 897 – 414 = 483

35. (a) Required average =

$\frac{\left(\frac{11}{100} \times 4600 \times \frac{1}{2} + \frac{8}{100} \times 4600 \times \frac{3}{4} + \frac{15}{100} \times 4600 \times \frac{3}{5}\right)}{3}$

$= \frac{253 + 276 + 414}{3} \approx 314$

36. (c) Difference is maximum for Mechanical stream i.e.

$= \frac{2}{4} \times \frac{26}{100} \times 4600 = 598$

37. (e) Total number of girls

$= \frac{11}{100} \times 4600 \times \frac{1}{2} + \frac{8}{100} \times 4600 \times \frac{1}{4} + \frac{15}{100} \times 4600 \times \frac{2}{5} + \frac{26}{100} \times 46000 \times \frac{3}{4}$

$+ \frac{22}{100} \times 4600 \times \frac{1}{2} + \frac{18}{100} \times 46000 \times \frac{1}{6}$

= 253 + 92 + 276 + 897 + 506 + 138 = 2162

38. (d) From previous question,

Total no of girls in college = 2162

No of boys in college = 4600 – 2162 = 2438

Required percentage

$= \frac{(2438 - 2162)}{2162} \times 100 = 12.76\%$

39. (b) According to question

$(81 + 108) \times \frac{5}{18} = \frac{3L + 4L}{8}$

52.5 × 8 = 7L

L = 60

Length of train X = 180 metres

Length of train Y = 240 metres

Let when trains are running in same direction cross each other in T sec

$(108 - 81) \times \frac{5}{18} = \frac{180 + 240}{T}$

7.5T = 420

T = 56

40. (d) Let age of A & B three years ago be 7x & 8x years respectively

ATQ

$\frac{7x + 9}{8x + 9} = \frac{10}{11}$

77x + 99 = 80x + 90

3x = 9

x = 3

Present age of A = 3 × 7 + 3 = 24 years

Present age of B = 3 × 8 + 3 = 27 years

Let A and B completed their graduation 'n years' ago

So, $\frac{24 - n}{27 - n} = \frac{20}{23}$

552 – 23n = 540 – 20n

n = 4

Age of C when A & B completed their graduation

= 26 – 4 = 22 years

Age of D when as A & B completed their graduation

= 23 – 4 = 19 years

Required sum = 22 + 19 = 41 years.

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