QUANTITATIVE APTITUDE
SOLUTIONS

IBPS RRB
CLERK 2019
MEMORY BASED PAPER

1) Answer: C

1 * 1 + 1 = 2

2 * 2 + 1 = 5

5 * 3 + 1 = 16

16 * 4 + 1 = 65

65 * 5 + 1 = **326 (not 328)**

326 * 6 + 1 = 1957

2) Answer: D

4 + 7 = 11

11 + 14 = 25

25 + 21 = 46

46 + 28 = 74

74 + 35 = **109 (not 129)**

109 + 42 = 151

3) Answer: B
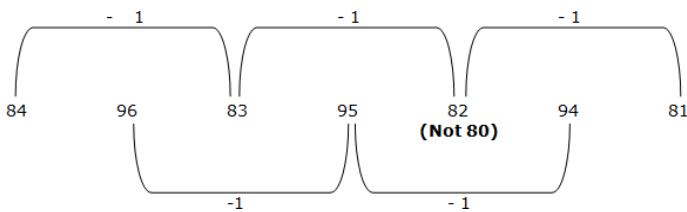
4) Answer: A

$3 + 1^2$ = **4 (not 5)**

$4 + 2^2 = 8$

$8 + 3^2 = 17$

$17 + 4^2 = 33$

$33 + 5^2 = 58$

$58 + 6^2 = 94$

5) Answer: D

A to B's salary ratio = 1/3

A and B spends (x * 15/100) and (3x * 15/100) for rent

Remaining amount = x * 85/100 + 3x * 85/100 = 40800

17x + 51x = 40800 * 20

68x = 40800 * 20

= > x = 12000

A's rent amount = 12000 * 15/100 = Rs.1800

6) Answer: D

Required difference = (525 + 252 + 363 + 486) - (424 + 516 + 328 + 224)

= 1626 - 1492 = 134

7) Answer: A

Required difference = (454 – 48) – (252 – 64)

= 406 – 188

= 218

8) Answer: E

Required average = (424 + 516 + 328 + 224)/4

= 1492/4 = 373

9) Answer: A

Required ratio = (328 + 712): (486 + 618)

= 1040: 1104

= 65: 69

10) Answer: D

Required percentage

= (328 + 712 + 363 + 439)/(224 + 384 + 486 + 618) * 100

= 1842/1712 * 100

= 108%

11) Answer: C

$2^3 * 3^2 \div (90 \div ?) = \sqrt{64}$

8 * 9 / (90/?) = 8

9 * ? = 90

= > ? = 10

12) Answer: B

(2 ¼ ÷ 4) * 8 = ? * 10

9/4/4 * 8 = ? * 10

? = 0.45

13) Answer: E

(? – 0.5) ÷ 0.2 = 120 ÷ 2

? – 0.5 = 60 * 0.2

? = 12 + 0.5 = 12.5

14) Answer: E

80% of (1.5 * 4 ÷ ?) = 24

4/5 * (6 /?) = 24

? = 0.2

15) Answer: A

$\sqrt{5929} + \sqrt{8464} = x^2$

$77 + 92 = x^2$

$169 = x^2$

= > x = 13

16) Answer: D

5/8 of 4/9 of 3/5 of 222 = x

= > x = 5/8 * 4/9 * 3/5 * 222

= > x = 37

17) Answer: C

$\sqrt{(x + 4)} = ¼ * 8^2$

$(x + 4) = 16^2$

= > x + 4 = 256

= > x = 252

18) Answer: B

$(\sqrt{361} \div 19) * (\sqrt{729} \div 9)$ =?

(19/19) * (27/9) =?

1 * 3 =?

3 =?

19) Answer: D

$(\sqrt[3]{2197} \div 32 (1/2)) * \sqrt{625} * (?) = 1000$

13 * 2/65 * 25* (?) = 1000

10 * (?)= 1000

? = 100

20) Answer: B

$(\sqrt{1296} \div 64) * (\sqrt[3]{3375} \div 45)$ =? ÷ 48

(36/64) * (15/45) =? ÷ 48

3/16 * (48) =?

9 =?

21) Answer: B

Ratio of milk and water in the mixture = 64: 20 = 16: 5

One – fourth of the mixture = 84 * ¼ = 21 litres taken out

Milk in the final mixture = (64 - 16) + x = (48 + x) litres

Water in the final mixture = (20 - 5) = 15 litres

According to the question,

(48 + x)/15 = 4/1

48 + x = 60

= > x = 12 litres

22) Answer: C

Let the cost price be x

Then,

SP = 112/100 * CP = 112x/100

New CP = 80/100 * x

New SP = 80x/100 * 150/100 = 120x/100

Then,

120x/100 – 112x/100 = 6

8x/100 = 6

x = 75

23) Answer: C

$x^2 - 17x + 72 = 0$

$x^2 - 9x - 8x + 72 = 0$

(x - 9) (x - 8) = 0

= > x = 8, 9

$y^2 - 17y + 70 = 0$

$y^2 - 7y - 10y + 70 = 0$

(y - 7) (y - 10) = 0

= > y = 7, 10

Relationship between x and y cannot be determined

24) Answer: C

$x^2 - x - 42 = 0$

$x^2 - 7x + 6x - 42 = 0$

x (x - 7) + 6 (x - 7) = 0

(x - 7) (x + 6) = 0

= > x = -6, 7

$y^2 + y - 30 = 0$

$y^2 + 6y - 5y - 30 = 0$

y (y + 6) – 5 (y + 6) = 0

(y - 5) (y + 6) = 0

= > y = 5, - 6

Relationship between x and y cannot be determined

25) Answer: D

$x^2 - 9x + 20 = 0$

$x^2 - 5x - 4x + 20 = 0$

(x - 5) (x - 4) = 0

= > x = 4, 5

$y^2 - 15y + 54 = 0$

$y^2 - 6y - 9y + 54 = 0$

(y - 6) (y - 9) = 0

= > y = 6, 9

Hence x < y

26) Answer: E

$2x^2 - 7x + 3 = 0$

$2x^2 - 6x - x + 3 = 0$

2x (x - 3) – 1 (x - 3) = 0

= > x = 3, 1/2

$y^2 - 7y + 12 = 0$

$y^2 - 4y - 3y + 12 = 0$

(y - 4) (y - 3) = 0

= > y = 3, 4

Hence, x ≤ y

27) Answer: D

Let the speed and length of the train be x and y

Then

y + 450 = x * 5/18 * 80 -----(1)

y = x * 5/18 * 20   ---- (2)

sub (2) in (1)

(x * 5/18 * 20) + 450 = x * 5/18 * 80

(x * 5/18 * 80) – (x * 5/18 * 20) = 450

x * 5/18 * 60 = 450

x = 27 kmph

y = 27 * 5/18 * 20 = 150 m

28) Answer: B
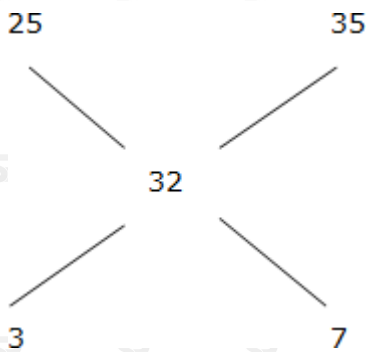
Difference = $P * r^2/100^2$

$30.42 = 1800 * r^2/100^2$

$3042/18 = r^2$

r = 13%

29) Answer: C

Required ratio = 3: 7

30) Answer: D

According to the question,

(40+x) * 2 = 40 *4

(40+x) = 40 * 2

40 +x =80

= > x =40 students added newly

31) Answer: D

Required ratio = (20 + 36): (30 + 40)

= 56: 70 = 4: 5

32) Answer: C

Required difference = 84 – 44 = 40 km

33) Answer: E

Required percentage = 20/40 * 100 = 50%

34) Answer: B

Required total = 54 + 36 + 20 = 110 km

35) Answer: C

Required percentage = (54 - 30)/30 * 100

= 24/30 * 100 = 80%

36) Answer: D

A = 2C; A = B – 6

B: C = 12:5

B = (12/5) * C

Substituting for B in A = B – 6

A = (12/5) C – 6

2C = (12/5) C – 6

2C = (12C – 30)/5

10C = 12C – 30

C = 15

Present age of B = (12/5) * C = (12/5)* (15)= 36 years

37) Answer: B

Upstream speed = 36/2 = 18 km/hr

Downstream speed = 66/3 = 22

km/hr Speed of the boat in still water

= ½ * (downstream speed + upstream speed)

= ½ (18 + 22)

= 20 km/hr

38) Answer: A

Perimeter of circle A = 110

$2\pi r_a = 110$

r_a = 110 * 7/22 * ½ = 17.5

cm Perimeter of circle B = 132 $2\pi r_b = 132$

r_b = 132 * 7/22 * ½ =21

Required difference = 21 – 17.5 = 3.5 cm

39) Answer: E

LCM of 36 and 60 = 360, Total capacity = 360 litres

Pipe 1 = 360/36 = 10 litres per minute

Pipe 2 = 360/60 = 6 litres per minute

One – sixth of the tank = 360/6 = 60 litres

Required time = 60/16

= 15/4 minutes

40) Answer: A

Relative speed = (18 + 12) * 18/5

= 30 * 18/5 = 108 km/hr

Required time = 367.2/108 = 3.4 hours