CONTENTS

Ans. (a) From option (a),

	99
9	98 01
9	81
189	17 01
9	17 01
	××××

Hence, 9801 is a perfect square of 99.

262. If the last digit of the square of a number is 1. Find the last digit of its cube.

(a) Only 9 (b) 1 or 9
(c) Any odd number (d) Only 1

RRB JE - 27/06/2019 (Shift-I)

Ans : (b) Let the number be 9. The last digit of whose square is 1. Which is as follows-

$9^2 = 81$

Last digit of 729 which is cube of 9 = 9

Let the number be 11. The last digit of whose square is 1. Which is as follows-

$11^2 = 121$

The last digit of the cube of 11-

$11^3 = 1331$

Hence the last digit = 1

Hence the number will be 1 or 9.

263. The sum and the difference of two numbers are 25 and 3 respectively. Find the difference of their squares.

(a) 165 (b) 75
(c) 154 (d) 140

RRB JE - 27/06/2019 (Shift-III)

Ans : (b) Let the two numbers are x and y

According to the question

$x + y = 25$ ----(i)

$x - y = 3$ ----(ii)

$x^2 - y^2 = (x + y)(x - y) = 25 \times 3 = 75$

Hence, the difference of their squares = 75

264. How many perfect squares are there between 100 and 200?

(a) 7 (b) 4
(c) 6 (d) 5

RRB JE - 27/06/2019 (Shift-III)

Ans : (b) Perfect square numbers greater than 100 or nearest to 100 = 121 = $(11)^2$

Perfect square numbers smaller than 200 or nearest to 200 = 196 = $(14)^2$

The numbers from $(11)^2$ to $(14)^2$ are = 121, 144, 169, 196

Therefore, there will be 4 such perfect square numbers between 100 and 200.

265. Find the least number that should be added to 4042 to make it a perfect square.

(a) 41 (b) 54
(c) 64 (d) 58

RRB Group-D – 22/09/2018 (Shift-III)

Ans. (b) : Square root of 4042,

	63
6	4042
+6	36
123	442
	369
	73

Square of 64 = 64 × 64 = 4096

Hence, the required number = 4096–4042 = 54

By adding 54, the number 4042 will become a perfect square.

266. Divide the number 137592 by the smallest number that leaves no remainder and quotient is a perfect cube. Find the cube root of the quotient.

(a) 8 (b) 2 (c) 4 (d) 6

RRB Group-D – 05/12/2018 (Shift-II)

Ans. (d) 137592 = 2×2×2×3×3×3×7×7×13

Hence, it is clear that, dividing 137592 by 7 × 7 × 13 = 637 will leave no remainder And quotient 216 will be a perfect cube.

216 = 2×2×2×3×3×3

Hence, the required cube root = 2×3 = 6

267. A positive number exceed its square root by 30. Find the number.

(a) 16 (b) 36
(c) 25 (d) 49

RRB NTPC 02.04.2016 Shift : 3

Ans : (b) Let the number be x, then-

$x = \sqrt{x} + 30$

$x - 30 = \sqrt{x}$

On squaring in both side-

$(x-30)^2 = (\sqrt{x})^2$

$x^2 + 900 - 60x = x$

$x^2 - 60x - x + 900 = 0$

$x^2 - 61x + 900 = 0$

$x^2 - 36x - 25x + 900 = 0$

$x(x-36) - 25(x-36) = 0$

$(x-36)(x-25) = 0$

$x - 36 = 0$ or $x - 25 = 0$

$x = 36$ or $x = 25$

25 is not more than its square root, which does not follow the condition.

Hence, the required number will be x = 36.

268. What smallest number should be added to the sum of squares of 15 and 14, so that the resulting number is a perfect square?

(a) 17 (b) 20 (c) 11 (d) 9

RRB NTPC 29.03.2016 Shift : 1

Ans : (b) $15^2 + 14^2 = 225 + 196 = 421$

Let the number to added be x,

$421 + x = 441$

$\Rightarrow x = 441 - 421 = 20$

Hence, the required number = 20

269. Calculate the sum of squares of numbers from 1 to 9.
(a) 284 (b) 285
(c) 385 (d) 380
RRB NTPC 27.04.2016 Shift : 1

Ans : (b) The sum of squares of first n numbers
$$= \frac{n(n+1)(2n+1)}{6}$$
$\therefore$ The sum of squares from 1 to 9 will be-
$$= \frac{9(9+1)(18+1)}{6} = \frac{9\times10\times19}{6} = 285$$

270. Calculate the sum of squares of number from 1 to 10.
(a) 384 (b) 285
(c) 385 (d) 380
RRB NTPC 30.04.2016 Shift : 2

Ans : (c) The sum of squares of first n numbers
$$= \frac{n(n+1)(2n+1)}{6}$$
The sum of squares of the numbers from 1 to 10 will be-
$$= \frac{10(10+1)(20+1)}{6} = \frac{10\times11\times21}{6} = 385$$

271. Find the least number which should be added to 7864, to make it a perfect square.
(a) 61 (b) 57
(c) 71 (d) 79
RRB Group-D – 11/12/2018 (Shift-III)

Ans : (b) Adding 57 to 7864, gives 7921 which is a perfect square of 89.
Hence, it is clear that adding 57 to 7864 will make the number a perfect square.

272. The number 4050 becomes a perfect square when multiplying by a positive integer. Find the square root of the number.
(a) 95 (b) 80
(c) 90 (d) 85
RRB Group-D – 01/10/2018 (Shift-III)

Ans : (c) $\because 4050 = 2\times\overline{3\times3}\times\overline{3\times3}\times\overline{5\times5}$
Hence, number 4050 becomes a perfect square when multiplied by 2 = $4050\times2 = 8100$
$\therefore$ The required square root of the number 8100
$= 2\times3\times3\times5 = 90$

273. Which of the following numbers is a perfect square?
(a) 0.09 (b) 8.1
(c) 0.025 (d) All
RRB NTPC 29.03.2016 Shift : 2

Ans : (a) $0.09 = (0.3)^2$
Hence, only 0.09 is a perfect square number.

Type - 7

274. Find the sum of prime factors of $9^6\times12^4\times7^7$
(a) 13 (b) 12
(c) 14 (d) 11
RRB Group-D 26/08/2022 (Shift-III)

Ans. (b) : $9^6\times12^4\times7^7$
$= 3^{12}\times3^4\times2^8\times7^7$
$= 3^{16}\times2^8\times7^7$
Sum of prime factors
$= 3+2+7 = 12$

275. For any natural number n, $6^n - 5^n$ always ends with ;
(a) 7 (b) 1
(c) 5 (d) 3
RRB NTPC 28.12.2020 (Shift-II) Stage Ist

Ans. (b) : The unit value of $6^n–5^n$ for any natural number 'n' will always be 1 because 6 can be any natural number in the power that units number in the power of 5 has its unit digit as 5.

276. What is the total number of odd and even divisors of 120, respectively?
(a) 12,4 (b) 16,0
(c) 4,12 (d) 8,8
RRB NTPC 01.02.2021 (Shift-II) Stage I

Ans. (c) : Divisors of 120–
1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24
30, 40, 60, 120
Number of even divisors – 12,
Number of odd divisors – 4

277. If the sum of five consecutive multiples of 2 is 660, then find the largest number.
(a) 162 (b) 130
(c) 125 (d) 136
RRB NTPC 15.02.2021 (Shift-II) Stage Ist

Ans. (d) : Let five consecutive multiple of 2 –
2x, 2x+2, 2x+4, 2x+6, 2x+8
According to the question,
$2x + 2x + 2 + 2x + 4 + 2x + 6 + 2x + 8 = 660$
$10x+20=660$
$10x=640$
$\boxed{x = 64}$
Hence, largest number $= 2x + 8 = 2\times64+8$
$=128+8$
$= \boxed{136}$

278. How many factors of $2^7 \times 3^4 \times 5^3 \times 7$ are even ?
(a) 40 (b) 280
(c) 320 (d) 84
RRB NTPC 31.01.2021 (Shift-I) Stage Ist
RRB NTPC 14.03.2021 (Shift-I) Stage Ist

Ans. (b) : $2^7 \times 3^4 \times 5^3 \times 7$ Number of factors.
$= (7 + 1)(4 + 1)(3 + 1)(1 + 1)$
$= 8 \times 5 \times 4 \times 2$
$= 320$
$\therefore$ Number of even factors = 320 – total no. of odd factors.
$= 320 – \{(4 + 1)(3 + 1)(1 + 1)\}$
$= 320 – \{5 \times 4 \times 2\}$
$= 320 – 40$
$= 280$

279. Find the digit in the unit's place of $124^n + 124^{(n+1)}$, where n is any whole number.
(a) 4 (b) 8
(c) 2 (d) 0
RRB NTPC 17.02.2021 (Shift-II) Stage Ist

Ans. (d) : $124^n + 124^{(n+1)}$
On putting n =1
$= 124 + (124)^2$
For unit digit 4 + 6 = 10
Hence, It is clear that the digit come in the unit place will be '0'.

280. What is the unit digit in the following product?
91×92×93×.....×99
(a) 2 (b) 1 (c) 4 (d) 0
RRB NTPC 09.02.2021 (Shift-II) Stage Ist

Ans. (d) : ∵ $91\times92\times93\times94\times95\times96\times97\times98\times99$
It is clear that multiplying by taking unit digits of all the numbers will give '0' i.e. where 2×5 comes then its unit digit is always zero.

281. Find the number of factors of 4200.
(a) 48 (b) 56 (c) 64 (d) 46
RRB NTPC 26.07.2021 (Shift-II) Stage Ist

Ans. (a) : $4200 = 2\times2\times2\times5\times5\times3\times7$
$=2^3\times5^2\times3^1\times7^1$
The number of factors = $(3+1)\times(2+1)\times(1+1)\times(1+1)$
$= 4\times3\times2\times2$
$= 48$

282. How many factors does the number 12288 have?
(a) 24 (b) 26
(c) 28 (d) 22
RRB NTPC 23.07.2021 (Shift-I) Stage Ist

Ans. (b) : $12288 = 2\times2\times2\times2\times2\times2\times2\times2\times2\times2\times2\times2\times3 = 2^{12}\times3^1$
Hence numbers of factors = $(12+1)\times(1+1)$
$= 13\times2$
$= 26$

283. If a positive number N, when divided by 5 leaves a remainder 3, then the unit's place digit of N is?
(a) 0 or 5 (b) 0 or 2
(c) 3 or 8 (d) 1 or 5
RRB NTPC 25.01.2021 (Shift-I) Stage Ist

Ans. (c) : Required positive number
$= 5K+3$ (∵ K = 0,1,2…..)
$= 5\times0+3 = 3$ (On putting K = 0)
$= 5\times1+3 = 8$ (On putting K = 1)
Hence, unit digit of N = 3 or 8

284. The unit digit in 4 × 38 × 764 × 1256 is :
(a) 6 (b) 8
(c) 4 (d) 5
RRB NTPC 28.12.2020 (Shift-I) Stage Ist

Ans. (b) :
4 × 38 × 764 × 1256
↓ ↓ ↓ ↓
4 × 8 × 4 × 6
= 32 × 24
↓ ↓
= 2 × 4
Hence unit digit = 8

285. Unit digit of $(1373)^{36} - (1442)^{20}$ is -
(a) 2 (b) 4
(c) 5 (d) 3
RRB ALP CBT-2 Physics & Maths 22-01-2019 (Shift-I)

Ans. (c) : $(1373)^{36} - (1442)^{20}$
$= (3)^{36} - (2)^{20}$
$= (3)^{9\times4} - (2)^{5\times4}$
$= (3)^4 - (2)^4$
$= 81 - 16$
$= 65$
$= 5$

286. How many of the factors of 256 are perfect squares?
(a) 5 (b) 3
(c) 6 (d) 4
RRB ALP & Tec. (20-08-18 Shift-II)

Ans : (a) Perfect square factors of 256 = 1, 4, 16, 64, 256
Hence, the required number of perfect square factors = 5

287. Which of these numbers has the highest number of divisors?
(a) 156 (b) 240
(c) 172 (d) 200
RRB JE - 23/05/2019 (Shift-I)

Ans : (b) From options–
$156 = 2^2\times3^1\times13^1 = (2+1)(1+1)(1+1) = 12$ (divisor)
$240 = 2^4\times3^1\times5^1 = (4+1)(1+1)(1+1) = 20$ (divisor)
$172 = 2^2\times43^1 = (2+1)(1+1) = 6$ (divisor)
$200 = 2^3\times5^2 = (3+1)(2+1) = 12$ (divisor)
Hence, It is clear that the number of the divisors of 240 is highest.

288. Find the unit digit in given factor of $(3451)^{51} \times (531)^{43}$.
(a) 6 (b) 4
(c) 1 (d) 9
RRB RPF-SI -11/01/2019 (Shift-I)

Ans : (c) The given expression is $(3451)^{51} \times (531)^{43}$
According to the question it is clear that the unit digit of 3451 and 531 is 1, so the unit digit of their product will also be 1.

289. How many multiples of $2^8 \times 3^2 \times 5^3 \times 7^5$ are even numbers?
(a) 288 (b) 168
(c) 576 (d) 464
RRB Group-D – 06/12/2018 (Shift-II)

Ans. (c) : The number of factors of $2^8 \times 3^2 \times 5^3 \times 7^5 = (8+1)(2+1)(3+1)(5+1) = 648$
∴ The number of even factors (multiples) = 648 – The number of total odd factors
$= 648 - \{(2+1)(3+1)(5+1)\}$
$= 648 - \{3\times4\times6\}$
$= 648 - 72 = 576$

290. How many factors of 729 are perfect squares?
(a) 5 (b) 4
(c) 3 (d) 2
RRB Group-D – 01/10/2018 (Shift-I)

Ans. (c) : The factors of 729,

3	729
3	243
3	81
3	27
3	9
3	3
	1

Perfect squares $= \overline{3\times3}\times\overline{3\times3}\times\overline{3\times3}$

Hence, total 3 factors of 729 (9,9,9) are perfect squares.

291. How many multiples of $2^9 \times 3^5 \times 5^4 \times 7^6$ are odd numbers?

(a) 288 (b) 144
(c) 210 (d) 140

RRB Group-D – 06/12/2018 (Shift-III)

Ans. (c) : The required odd multiple number
$= (5+1) \times (4+1) \times (6+1)$
$= 6 \times 5 \times 7 = 210$

292. Find the last digit of 213^6 ?

(a) 6 (b) 3
(c) 7 (d) 9

RRB Group-D – 05/12/2018 (Shift-II)

Ans. (d) The unit digit of 213^6
$213^6 = (213^4 \times 213^2)$
$1 \times 9 = 9$

293. The smallest natural number, by which 216 should be multiplied, so that the number of factors of the product is odd?

(a) 4 (b) 6
(c) 12 (d) 8

RRB Group-D – 11/12/2018 (Shift-I)

Ans. (b)
The number of multiples of $(216 = 2^3 \times 3^3)$ is:
$= (3+1)(3+1) = 4 \times 4 = 16$ (even)
The smallest natural number, by which 216 should be multiplied, so that the number of factors of the product is odd = 6
$\therefore$ Required number of multiples in $216 \times 6 = 2^4 \times 3^4$
$= (4+1)(4+1) = 25$

294. What is the unit digit of $[4523^{1632} \times 2224^{1632} \times 3225^{1632}]$

(a) 1 (b) 0
(c) 4 (d) 5

RRB NTPC 18.01.2017 Shift : 3

Ans : (b) $\left[(4523)^{1632} \times (2224)^{1632} \times (3225)^{1632}\right]$
$\Rightarrow (3)^4 \times (4)^4 \times (5)^4$
$81 \times 256 \times 625$
$1 \times 6 \times 5$
$30 \Rightarrow \boxed{0}$

295. Calculate the total prime factors in the product of $\{(8)^{10} \times (9)^7 \times 7^8\}$

(a) 45 (b) 54
(c) 52 (d) 65

RRB NTPC 18.04.2016 Shift : 2

Ans : (c) $(8)^{10} \times (9)^7 \times 7^8$
$= \left((2)^3\right)^{10} \times \left((3)^2\right)^7 \times (7)^8$
$= 2^{30} \times 3^{14} \times 7^8$
Hence, the total prime factors = 30+14+8 = 52

296. Calculate the total prime factors in the product of $\{(16)^7 \times (27)^6 \times 5^9\}$

(a) 28 (b) 43
(c) 55 (d) 56

RRB NTPC 16.04.2016 Shift : 2

Ans : (c) Total prime factors $\{(16)^7 \times (27)^6 \times 5^9\}$
$= \left(2^4\right)^7 \times \left(3^3\right)^6 \times 5^9$
$= 2^{28} \times 3^{18} \times 5^9$
$= 28 + 18 + 9 = 55$

297. Find the unit digit in the product of $(4211)^{102} \times (361)^{52}$

(a) 3 (b) 1
(c) 4 (d) 7

RRB NTPC 16.04.2016 Shift : 3

Ans : (b)
The required unit digit in $(4211)^{102} \times (361)^{52}$
$\Rightarrow (1)^{102} \times (1)^{52} = 1 \times 1 = 1$

298. Find the unit digit in the following $(1234)^{102} + (1234)^{103}$

(a) 2 (b) 4
(c) 0 (d) 1

RRB NTPC 28.04.2016 Shift : 2

Ans : (c) Given expression: $(1234)^{102} + (1234)^{103}$
The unit digit,
$= (4)^{102} + (4)^{103}$
$= (4^2)^{51} + (4^2)^{51} \times 4^1$
$= (16)^{51} + (16)^{51} \times 4^1$
$= 6 + 6 \times 4$
$= 6 + 24 = 30$
Hence, the unit digit will be 0.

299. How many factors of 512 are perfect squares?

(a) 6 (b) 4
(c) 3 (d) 5

RRB Group-D – 28/09/2018 (Shift-I)

Ans : (d) The factors of 512
$= 1, 2, 4, 8, 16, 32, 64, 128, 256, 512$
In which = 1, 4, 16, 64, 256 are perfect squares
So, the total number of perfect squares factors is 5.

300. Which is the smallest positive integer or natural number, when divides 1920 so that the number of factors of quotient is odd?

(a) 40 (b) 10
(c) 20 (d) 30

RRB Group-D – 12/12/2018 (Shift-I)

Ans. (d) From options,

Number of factors in $\frac{1920}{40} = 48 = 2^4 \times 3$

is $(4+1)(1+1) = 10$ (Even)

Number of factors in $\frac{1920}{10} = 192 = 2^6 \times 3$

is $(6+1)(1+1) = 14$ (Even)

Number of factors in $\frac{1920}{20} = 96 = 2^5 \times 3$

is $(5+1)(1+1) = 12$ (Even)

Number of factors in $\frac{1920}{30} = 64 = 2^6$

is $(6+1) = 7$ (Odd)

Hence, option (d) will be required answer.

301. How many factors of the number $2^{10} \times 3^6 \times 5^3 \times 7^5$ are divisible by 2160?

(a) 180 (b) 336
(c) 504 (d) 560

RRB Group-D – 11/12/2018 (Shift-III)

Ans : (c) Factors of $2160 = 2^4 \times 3^3 \times 5^1$

Let the total factors are n.

$$n = \frac{2^{10} \times 3^6 \times 5^3 \times 7^5}{2^4 \times 3^3 \times 5^1}$$

$n = 2^6 \times 3^3 \times 5^2 \times 7^5$

So, the total number of factors = (6+1)(3+1)(2+1)(5+1)
$= 7 \times 4 \times 3 \times 6 = 504$

Type - 8

302. What is the place value of 5 in the number 56789214?

(a) 5×10^6 (b) 5×10^4
(c) 5×10^7 (d) 5×10^5

RRB NTPC 29.01.2021 (Shift-II) Stage I

Ans. (c) : The place value of 5 in 56789214 –

56789214

$\rightarrow 5\times10^7$

303. Find the sum of the place value and the face value of 7 in the number 53736.

(a) 77 (b) 707
(c) 770 (d) 777

RRB NTPC 29.01.2021 (Shift-II) Stage Ist

Ans. (b) : The place value and the face value of 7 in the number 53736.

Place value of 7 = 700

Face value of 7 = 7

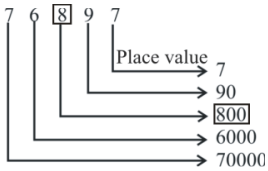
Required sum = 700 + 7
= 707

304. In the number 76897, what is the place value of 8?

(a) 8 (b) 8000
(c) 800 (d) 80

RRB NTPC 09.03.2021 (Shift-II) Stage Ist

Ans. (c) :



Hence, place value of 8 in 76897 will be 800.

305. The face value of 8 in 758639 is :

(a) 8000 (b) 80
(c) 800 (d) 8

RRB NTPC 25.01.2021 (Shift-II) Stage Ist

Ans. (d) : In the given number = 758639

The face value of 8 = 8

306. Find the difference of the place and face values of 6 in 516372

(a) 5998 (b) 6698
(c) 5394 (d) 5994

RRB NTPC 25.01.2021 (Shift-II) Stage Ist

Ans. (d) : The place values of 6 in 516372–

5 1 6 3 7 2

$\rightarrow 6 \times 1000 = 6000$

the face values of 6 = 6

Required difference = 6000 – 6
= 5994

307. The sum of the place values of 3 in 3636 is:

(a) 330 (b) 3030
(c) 3 (d) 3003

RRB NTPC 25.01.2021 (Shift-II) Stage Ist

Ans. (b) : The place value of 3 in 3636.

3 6 3 6

$\rightarrow 3 \times 10 = 30$

$\rightarrow 3 \times 1000 = 3000$

Sum of place values of 3 = 3000 + 30
= 3030

308. The difference between the place values of 2 and 3 in the number 128935 is:

(a) 300 (b) 19970
(c) 20000 (d) 30

RRB NTPC 02.03.2021 (Shift-I) Stage Ist

Ans. (b) :

1 2 8 9 3 5

$\rightarrow$ Place value = 30

$\rightarrow$ Place value = 20000

Required difference = 20000 – 30 = 19970

309. The sum of the place values of 9 in 96961 is:

(a) 9000 (b) 18
(c) 9090 (d) 90900

RRB NTPC 19.01.2021 (Shift-I) Stage Ist

Ans. (d) : Sum of the place value of 9 in number 96961
= 90000+ 900
= 90900

Hence, option (d) is correct.

$$\frac{10}{11}+x=\frac{11}{10}$$
$$x=\frac{11}{10}-\frac{10}{11}=\frac{121-100}{110}=\frac{21}{110}$$
Hence the required number is $\frac{21}{110}$.

140. What should be added to $5\frac{3}{5}$ to get $8\frac{3}{7}$?

(a) $\frac{99}{35}$ (b) $\frac{96}{35}$
(c) $\frac{99}{33}$ (d) $\frac{94}{35}$

RRB Group-D – 25/09/2018 (Shift-III)

Ans. (a) : Let the required number be x.
According to the question,
$$5\frac{3}{5}+x=8\frac{3}{7}$$
$$x=8\frac{3}{7}-5\frac{3}{5}=\frac{59}{7}-\frac{28}{5}$$
$$=\frac{295-196}{35}=\frac{99}{35}$$
Hence, the required number is $\frac{99}{35}$

141. The sum of two fractions is $\frac{7}{6}$. One of the fraction is $\frac{3}{4}$. Find the other.

(a) $\frac{4}{12}$ (b) $\frac{5}{12}$
(c) $\frac{4}{2}$ (d) $\frac{1}{12}$

RRB Group-D – 26/09/2018 (Shift-III)

Ans : (b) Let the other fraction is x.
According to the question,
$$\Rightarrow x+\frac{3}{4}=\frac{7}{6} \Rightarrow x=\frac{7}{6}-\frac{3}{4}$$
$$\Rightarrow x=\frac{14-9}{12}=\frac{5}{12}$$
Hence, the required fraction is $\frac{5}{12}$.

142. A fraction when added to $\frac{7}{3}$, gives 4. Find the fraction.

(a) $1\frac{2}{3}$ (b) $\frac{11}{2}$
(c) $-\frac{1}{2}$ (d) $\frac{2}{3}$

RRB Group-D – 28/09/2018 (Shift-I)

Ans : (a) Let the required fraction be x.
According to the question,
$$\Rightarrow \frac{x}{1}+\frac{7}{3}=4$$
$$\Rightarrow \frac{3x+7}{3}=4$$
$$\Rightarrow 3x+7=4\times 3$$
$$\Rightarrow 3x+7=12 \Rightarrow 3x=12-7 \Rightarrow 3x=5$$
$$\Rightarrow x=\frac{5}{3}=\left(1\frac{2}{3}\right)$$
Hence, the required fraction is $1\frac{2}{3}$.

143. The difference between two fractions is $\frac{5}{6}$. The smaller one is $\frac{3}{4}$. Find the other.

(a) $\frac{1}{12}$ (b) $\frac{19}{24}$
(c) $\frac{19}{12}$ (d) $\frac{8}{10}$

RRB Group-D – 22/10/2018 (Shift-II)

Ans : (c) Let the other fraction be x.
According to the question,
$$x-\frac{3}{4}=\frac{5}{6}$$
$$\Rightarrow x=\frac{5}{6}+\frac{3}{4}$$
$$x=\frac{38}{24}=\frac{19}{12}$$
Hence, the other fraction is $\frac{19}{12}$.

144. The value of $\frac{5}{3}+\frac{3}{5}$=?

(a) $\frac{15}{8}$ (b) $\frac{8}{15}$
(c) $2\frac{4}{15}$ (d) $\frac{8}{8}$

RRB Group-D – 22/10/2018 (Shift-II)

Ans : (c) From given expression,
$$\Rightarrow\frac{5}{3}+\frac{3}{5}$$
$$=\frac{25+9}{15}$$
$$=\frac{34}{15}=2\frac{4}{15}$$

145. The difference of $\frac{25}{12}$ and $\frac{15}{8}$ = ?

(a) $\frac{10}{24}$ (b) $\frac{7}{13}$
(c) $\frac{10}{4}$ (d) $\frac{5}{24}$

RRB Group-D – 06/12/2018 (Shift-II)

Ans. (d) The difference of $\frac{25}{12}$ and $\frac{15}{8}$,
$$\frac{25}{12}-\frac{15}{8}=\frac{50-45}{24}=\frac{5}{24}$$

146. To get $\frac{25}{3}, \frac{5}{12}$ should be multiplied by:

(a) 10 (b) 20

(c) $\frac{4}{5}$ (d) $\frac{5}{4}$

RRB Group-D – 05/12/2018 (Shift-II)

Ans. (b) Let the required number be x.
According to the question,

$$\frac{5}{12} \times x = \frac{25}{3}$$

$$\frac{x}{4} = 5$$

$$x = 20$$

147. The square root of a positive fraction, when added to 1, is $3\frac{1}{4}$. Find the fraction.

(a) $2\frac{1}{4}$ (b) $6\frac{1}{4}$

(c) $5\frac{1}{16}$ (d) $3\frac{1}{16}$

RRB Group-D – 02/11/2018 (Shift-I)

Ans. (c)

Let the fraction be $= \frac{x}{y}$

According to the question,

$$\sqrt{\frac{x}{y}} + 1 = 3\frac{1}{4}$$

$$\sqrt{\frac{x}{y}} = \frac{13}{4} - 1$$

$$\sqrt{\frac{x}{y}} = \frac{9}{4}$$

$$\frac{x}{y} = \frac{81}{16}, \quad \frac{x}{y} = 5\frac{1}{16}$$

148. The difference between $\frac{11}{12}$ and $\frac{7}{8}$=?

(a) $\frac{1}{4}$ (b) $\frac{4}{4}$

(c) $\frac{4}{24}$ (d) $\frac{1}{24}$

RRB Group-D – 11/12/2018 (Shift-III)

Ans : (d) The difference between $\frac{11}{12}$ and $\frac{7}{8}$

$$= \frac{11}{12} - \frac{7}{8}$$

$$= \frac{88 - 84}{96}$$

$$= \frac{4}{96}$$

$$= \frac{1}{24}$$

Hence, the required difference is $\frac{1}{24}$.

149. What is the fraction which, when subtracted from $\frac{3}{4}$, gives $\frac{2}{5}$?

(a) $-\frac{1}{1}$ (b) $\frac{7}{20}$

(c) $\frac{1}{20}$ (d) $\frac{3}{10}$

RRB Group-D – 08/10/2018 (Shift-III)

Ans : (b) Let the fraction be $\frac{x}{y}$.

According to the question,

$$\frac{3}{4} - \frac{x}{y} = \frac{2}{5}$$

$$\Rightarrow \quad \frac{x}{y} = \frac{3}{4} - \frac{2}{5}$$

$$\Rightarrow \quad \frac{x}{y} = \frac{15 - 8}{20}$$

$$\frac{x}{y} = \frac{7}{20}$$

150. What should be added to 3/5 to get 5/4?

(a) $\frac{15}{20}$ (b) $\frac{13}{20}$

(c) $\frac{2}{-1}$ (d) $\frac{1.25}{0.6}$

RRB Group-D – 05/10/2018 (Shift-III)

Ans. (b) Let the required number be x.
According to the question,

$$\frac{5}{4} = \frac{3}{5} + x$$

$$\frac{5}{4} - \frac{3}{5} = x$$

$$\frac{25 - 12}{20} = x$$

$$x = \frac{13}{20}$$

Hence, the required number is $\frac{13}{20}$.

151. When A fraction is subtracted from 1/5 gives 1/12. Find the fraction.

(a) $\frac{1}{7}$ (b) $\frac{11}{30}$

(c) $\frac{7}{60}$ (d) $\frac{5}{12}$

RRB Group-D – 04/10/2018 (Shift-I)

Ans. (c) Let the fraction be $\frac{x}{y}$.

According to the question,

$$\frac{1}{5} - \frac{x}{y} = \frac{1}{12}$$

$$\frac{1}{5} - \frac{1}{12} = \frac{x}{y}$$

$$\frac{12-5}{60}=\frac{x}{y}$$

$$\frac{x}{y}=\frac{7}{60}$$

152. In which fraction, when 5/16 is added gives 1?

(a) $\frac{11}{32}$ (b) $\frac{13}{2}$

(c) $\frac{22}{32}$ (d) $\frac{6}{8}$

RRB Group-D – 19/09/2018 (Shift-I)

Ans : (c) Let the fraction be x.

$$x+\frac{5}{16}=1, \qquad x=1-\frac{5}{16}$$

$$x=\frac{11}{16}, \qquad x=\frac{2\times11}{2\times16}=\frac{22}{32}$$

Hence, the require fraction is $\frac{22}{32}$.

153. What is the fraction which, when subracted from $\frac{1}{2}$, gives $\frac{2}{3}$?

(a) $\frac{1}{3}$ (b) $-\frac{1}{3}$

(c) $-\frac{1}{6}$ (d) $\frac{1}{6}$

RRB ALP & Tec. (20-08-18 Shift-I)

Ans : (c) Let the fraction be $\frac{x}{y}$.

According to the problem,

$$\frac{1}{2}-\frac{x}{y}=\frac{2}{3}\Rightarrow\frac{x}{y}=\frac{1}{2}-\frac{2}{3}$$

$$\frac{x}{y}=\frac{-1}{6}$$

154. How much should be added to $\frac{2}{3}$ to obtain $\frac{3}{2}$?

(a) $\frac{4}{9}$ (b) $\frac{5}{6}$

(c) $\frac{1}{-1}$ (d) $\frac{1.5}{6}$

RRB ALP & Tec. (17-08-18 Shift-I)

Ans : (b) Let the number to be added is x.

According to the question,

$$\frac{2}{3}+x=\frac{3}{2}$$

$$x=\frac{3}{2}-\frac{2}{3}=\frac{9-4}{6}=\frac{5}{6}$$

155. A fraction, when subtracted from $\frac{1}{3}$ gives $\frac{1}{12}$. The fraction is:

(a) $\frac{5}{12}$ (b) $\frac{1}{4}$

(c) $\frac{3}{4}$ (d) $\frac{1}{9}$

RRB ALP & Tec. (14-08-18 Shift-I)

Ans : (b) Let the fraction be $\frac{x}{y}$.

According to the question,

$$\frac{1}{3}-\frac{x}{y}=\frac{1}{12}$$

$$\frac{x}{y}=\frac{1}{3}-\frac{1}{12}=\frac{4-1}{12}=\frac{3}{12}=\frac{1}{4}$$

$$\frac{x}{y}=\frac{1}{4}$$

156. Which of the fractions given below, when added to $\frac{5}{8}$, gives 1?

(a) $\frac{6}{24}$ (b) $\frac{5}{2}$

(c) $\frac{6}{16}$ (d) $\frac{6}{3}$

RRB ALP & Tec. (09-08-18 Shift-II)

Ans : (c) Let the fraction be x.

According to the question,

$$\frac{5}{8}+x=1$$

$$x=1-\frac{5}{8} \qquad x=\frac{3}{8}$$

$$x=\frac{3\times2}{8\times2}$$

$$x=\frac{6}{16}$$

Hence the required fraction is = $\frac{6}{16}$.

Type - 8

157. The value of 0.0006697 to three digits of decimal will be:

(a) 0.000670 (b) 0.00669

(c) 0.001 (d) 0

RRB RPF Constable -22/01/2019 (Shift-I)

Ans : (c) The value of 0.0006697 till three digits of decimal = 0.001,
After decimal if the right digit is 5 or more than 5, then we add 1 to the left digit.

158. Which fraction is not equal to $\frac{15}{23}$?

(a) $\frac{105}{162}$ (b) $\frac{75}{115}$

(c) $\frac{45}{69}$ (d) $\frac{30}{46}$

RRB RPF-SI -12/01/2019 (Shift-I)

Ans : (a) From options–

(a) $\frac{105}{162}=\frac{35}{54}$ (b) $\frac{75}{115}=\frac{15}{23}$

(c) $\frac{45}{69}=\frac{15}{23}$ (d) $\frac{30}{46}=\frac{15}{23}$

Hence, it is clear that option (a) is not equal to $\frac{15}{23}$.

159. 0.065 × 0.4 = ?

(a) 0.26 (b) 0.026
(c) 2.6 (d) 0.0026

RRB RPF-SI -11/01/2019 (Shift-I)

Ans : (b) Given,
$0.065 \times 0.4 = 0.026$

160. Find the value of 0.1404 ÷ 0.06 = ?

(a) 0.234 (b) 2.34
(c) 234 (d) 23.4

RRB RPF Constable -18/01/2019 (Shift-I)

Ans :(b) Given,
$0.1404 \div 0.06$
$=\frac{0.1404\times10000}{0.06\times10000}=\frac{1404}{600}=2.34$

161. Find the sum of the place value of 5 and 4 in $\frac{6}{8}$ and $\frac{6}{25}$ respectively.

(a) $\frac{8}{100}$ (b) $\frac{99}{100}$
(c) $\frac{9}{100}$ (d) $\frac{88}{100}$

RRB Group-D – 28/09/2018 (Shift-III)

Ans : (c) $\frac{6}{8}=0.75$

The place value of 5, in 0.75 = $0.05=\frac{5}{100}$

and, $\frac{6}{25}=0.24$

The place value of 4, in 0.24 = $0.04=\frac{4}{100}$

So, the required sum of both values
$=\frac{5}{100}+\frac{4}{100}=\frac{9}{100}$

162. The whole value of 0.008594 to three digits of decimal will be?

(a) 0.008 (b) 0.009
(c) 0.00860 (d) 0.00859

RRB Group-D – 08/10/2018 (Shift-II)

Ans : (b) As we know :- After decimal if the right digit is 5 or more than 5, then we add 1 to the left digit.
Hence, the whole value of 0.008594 to the three digits of decimal will be 0.009.

163. x and y, given correct to 2 decimal place, are given as 4.51 and 2.48 respectively. What is the upper limit of the value of x + y? (The value is correct to the two digits of decimal.)

(a) 7.000 (b) 6.995
(c) 7.010 (d) 6.990

RRB Group-D – 12/10/2018 (Shift-III)

Ans : (a) x + y = 4.51 + 2.48 = 6.99
Hence, the nearest upper limit for the value of (x + y) that is 6.99 = 7.000.

164. Find the value of x.

$\frac{144}{0.144}=\frac{14.4}{x}$

(a) 0.0001 (b) 0.0144
(c) 0.1 (d) 0.01

RRB Group-D – 16/10/2018 (Shift-I)

Ans. (b) : Given expression,
$\frac{144}{0.144}=\frac{14.4}{x}$
$144\times x=14.4\times0.144$
$x=\frac{14.4\times0.144}{144}$
$x=\frac{144\times0.144}{144\times10}$
$x=0.0144$

165. If x is integer 0.80000, then what is interval of x?

(a) $0.79995 < x \le 0.80005$
(b) $0.799905 \le x < 0.800005$
(c) $0.799995 \le x < 0.800005$
(d) $0.79995 \le x < 0.80005$

RRB Group-D – 30/10/2018 (Shift-I)

Ans : (c)
The required interval of $x = 0.799995 \le x < 0.800005$

166. If $\frac{0.7}{1-6c}$ = -0.2 , then c = ?

(a) 0.8 (b) 0.5
(c) 0.75 (d) 0.075

RRB Group-D – 20/09/2018 (Shift-I)

Ans. (c) : Given,
$\frac{0.7}{1-6c}=-0.2$
$-0.2+1.2c=0.7$
$1.2c=0.9$
$c=\frac{0.9}{1.2}$
$c=0.75$

167. x is written as 15.84, to two digits of decimal. Which of the following is true?

(a) $15.835 < x \le 15.845$
(b) $15.835 < x < 15.845$
(c) $15.835 \le x \le 15.845$
(d) $15.835 \le x < 15.845$

RRB Group-D – 09/10/2018 (Shift-I)

Ans. (d) : Analyzing option (d),
15.835 is less than x, and 15.835 is written to two digits of decimal as 15.84 (approx). While 15.845 will be definitely greater.

168. If x is 0.70000, to five digits of decimal, then interval of x will be:

(a) $0.6995 \le x < 0.70005$
(b) $0.699995 \le x < 0.700005$
(c) $0.699905 \le x < 0.700005$
(d) $0.69995 < x \le 0.70005$

RRB Group-D – 10/10/2018 (Shift-III)

Ans : (b) If x is 0.70000, to five digits of decimal,
Then, $0.699995 \le x < 0.700005$ is correct.

169. The least value of x which makes $\frac{65}{x-14}$ an integer, is:

(a) 1 (b) –51
(c) 79 (d) –1

RRB Group-D – 26/10/2018 (Shift-III)

Ans : (b) From question,
Putting the value of options in the place of x.

(a) $\frac{65}{1-14}=\frac{65}{-13}=-5$ (Integer)

(b) $\frac{65}{-51-14}=\frac{65}{-65}=-1$ is also an integer for which the value of x is the least.

(c) $\frac{65}{79-14}=\frac{65}{65}=1$ (Integer)

(d) $\frac{65}{-1-14}=\frac{65}{-15}=-4.33$ (Non-Integer)

Hence, it is clear that the least required value of x is -51

170. The product of $\frac{144}{100}$ and $\frac{175}{216}$ will be = ?

(a) $\frac{7}{12}$ (b) $\frac{14}{3}$
(c) $\frac{7}{6}$ (d) $\frac{7}{3}$

RRB Group 'D' 07/12/2018 (Shift-I)

Ans : (c) $\frac{144}{100}\times\frac{175}{216}$
$=\frac{7}{6}$

171. x and y, are given correct to the two digits of decimal, are written as 3.57 and 3.42 respectively. What is the upper limit for x + y ?

(a) 7.000 (b) 7.010
(c) 6.990 (d) 6.995

RRB Group-D – 23/10/2018 (Shift-I)

Ans. (a) : According to the question,
x and y are correct to the two digits of decimal.
x = 3.57 and y = 3.42,
then, x + y = 3.57 + 3.42 = 6.99
hence, the upper limit of x + y = 7.000

172. x and y, are given correct to the two digits of decimal, are written as 2.51 and 3.50 respectively. What is the lower limit for x + y ?

(a) 6.010 (b) 5.995
(c) 6.000 (d) 5.990

RRB Group-D – 15/10/2018 (Shift-II)

Ans : (c) According to the question,
x = 2.51 and y = 3.50
then,
x + y = 2.51 + 3.50 = 6.01
So the lower limit for x + y is 6.000

173. Find the value of x.

$\frac{484}{4.84}=\frac{48.4}{x}$

(a) 0.484 (b) 0.00484
(c) 0.0484 (d) 4.84

RRB Group-D – 08/10/2018 (Shift-III)

Ans : (a) $\frac{484}{4.84}=\frac{48.4}{x}$
$\Rightarrow \quad x\times 484=48.4\times 4.84$
$\Rightarrow \quad x=\frac{484\times 484}{484\times 1000}$
Hence, x = 0.484

174. x and y, are given correct to the one digit of decimal, and written as 6.2 and 1.3 respectively. What is the upper limit of $\frac{x}{y}$?

(a) 4.96 (b) 5
(c) 4.77 (d) 5.05

RRB Group-D – 04/10/2018 (Shift-I)

Ans. (b) $\frac{x}{y}=\frac{6.2}{1.3}=4.76$

Hence, the value of upper limit of $\frac{x}{y}$ is 5.

175. 1.008 = ?

(a) $1\frac{1}{125}$ (b) $1\frac{3}{25}$
(c) $1\frac{2}{25}$ (d) $1\frac{2}{125}$

RRB Group-D – 01/10/2018 (Shift-II)

Ans. (a) : 1.008 = ?
$\Rightarrow \quad \frac{1008}{1000}=\frac{504}{500}=\frac{252}{250}=\frac{126}{125}=1\frac{1}{125}$
Hence, the value of 1.008 is $1\frac{1}{125}$.

176. If $X=\frac{63.5535}{13.05}$, find the value of X.

(a) 4.48 (b) 4.87
(c) 4.46 (d) 4.28

RRB Group-D – 23/09/2018 (Shift-II)

Ans : (b) $X=\frac{63.5535}{13.05}$
$X=\frac{6355.35}{1305}=4.87$
Hence, the value of X is 4.87

177. If 2334/33.1 = 261, then 23.34/3.31 = ?

(a) 0.261 (b) 2.61
(c) 26.1 (d) 261

RRB NTPC 18.04.2016 Shift : 3

Ans : (c) Given,
$\frac{2334}{33.1}=261$.....(1)
$\because \frac{23.34}{3.31}=\frac{2334}{331}$
$=\frac{2334}{33.1\times 10}$
$=\frac{2334}{33.1}\times\frac{1}{10}$
$=\frac{261}{10}$ {from equation (1)}
$=26.1$