Mathematics

1. What is the sum of 130+125+191?

A. 335

B. 456

C. 446

D. 426

Answer: C

2: If we minus 712 from 1500, how much do we get?

A. 788

B. 778

C. 768

D. 758

Answer: A

3: 50 times of 8 is equal to:

A. 80

B. 400

C. 800

D. 4000

Answer: B

4: 110 divided by 10 is:

A. 11

B. 10

C. 5

D. None of these

Answer: A

5: 20+(90÷2) is equal to:

A. 50

B. 55

C. 65

D. 60

Answer: C

6: The product of 82 and 5 is:

A. 400

B. 410

C. 420

D. None of these

Answer: B

7: Find the missing terms in multiple of 3: 3, 6, 9, __, 15

A. 10

B. 11

C. 12

D. 13

Answer: C

8: Solve 24÷8+2.

A. 5

B. 6

C. 8

D. 12

Answer: A

9: Solve: 300 – (150×2)

A. 150

B. 100

C. 50

D. 0

Answer: D

10: The product of 121 x 0 x 200 x 25 is

A. 1500

B. 0

C. 4000

D. None of these

Answer B

11: What is the next prime number after 5?

A. 6

B. 7

C. 9

D. 11

Answer: B

12. The probability of event equal to zero is called;

(a)Unsure event

(b)Sure Event

(c)Impossible event

(d)Independent event

Answer: c

13. The probability that cannot exist among the following:

(a)⅔

(b)-1.5

(c)15%

(d)0.7

Answer: b

14. If P(E) = 0.07, then what is the probability of ‘not E’?

(a)0.93

(b)0.95

(c)0.89

(d)0.90

Answer: a

15. A bag has 3 red balls and 5 green balls. If we take a ball from the bag, then what is the probability of getting red balls only?

(a)3

(b)8

(c)⅜

(d)8/3

Answer: c

16. A bag has 5 white marbles, 8 red marbles and 4 purple marbles. If we take a marble randomly, then what is the probability of not getting purple marble?

(a)0.5

(b)0.66

(c)0.08

(d)0.77

Answer: d

17. If x1, x2, x3,….., xn are the observations of a given data. Then the mean of the observations will be:

(a)Sum of observations/Total number of observations

(b)Total number of observations/Sum of observations

(c)Sum of observations+Total number of observations

(d)None of the above

Answer: a

18. If the mean of frequency distribution is 7.5 and $\sum fi\ xi = 120 + 3k$, $\sum fi = 30$, then k is equal to:

(a)40

(b)35

(c)50

(d)45

Answer: b

19. The mode and mean is given by 7 and 8, respectively. Then the median is:

(a)1/13

(b)13/3

(c)23/3

(d)33

Answer: c

20. The mean of the data: 4, 10, 5, 9, 12 is;

(a)8

(b)10

(c)9

(d)15

Answer: a

21. The median of the data 13, 15, 16, 17, 19, 20 is:

(a)30/2

(b)31/2

(c)33/2

(d)35/2

Answer: c

22.In an Arithmetic Progression, if a=28, d=-4, n=7, then an is:

(a)4

(b)5

(c)3

(d)7

Answer: a

23.If a=10 and d=10, then first four terms will be:

(a)10,30,50,60

(b)10,20,30,40

(c)10,15,20,25

(d)10,18,20,30

Answer: b

24.The first term and common difference for the A.P. 3,1,-1,-3 is:

(a)1 and 3

(b)-1 and 3

(c)3 and -2

(d)2 and 3

Answer: c

25.30th term of the A.P: 10,7, 4, …, is

(a)97

(b)77

(c)-77

(d)-87

Answer: c

26.11th term of the A.P. -3, -1/2, ,2 …. Is

(a)28

(b)22

(c)-38

(d)-48

Answer: b

27. The decimal expansion of 120/(3257) is

(a)Terminating

(b)Non-terminating

(c)Non-terminating and Non-repeating

(d)None of the above

Answer: (b)

28. For some integer n, the odd integer is represented in the form of:

(a) n

(b) n+1

(c) 2n+1

(d) 2n

Answer: (c)

29.HCF of 26 and 91 is:

(a)15

(b)13

(c)19

(d)11

Answer: (b)

30. Which of the following is not irrational?

(a) $(3+\sqrt{7})$

(b) $(3-\sqrt{7})$

(c) $(3+\sqrt{7})(3-\sqrt{7})$

(d) $3\sqrt{7}$

Answer: (c)

31. The addition of a rational number and an irrational number is equal to:

(a)rational number

(b)Irrational number

(c)Both

(d)None of the above

Answer: (b)

32.The pairs of equations $x+2y-5 = 0$ and $-4x-8y+20=0$ have:

(a)Unique solution

(b)Exactly two solutions

(c)Infinitely many solutions

(d)No solution

Answer: (c)

33. If a pair of linear equations is consistent, then the lines are:

(a)Parallel

(b)Always coincident

(c)Always intersecting

(d)Intersecting or coincident

Answer: d

34. The pairs of equations 9x + 3y + 12 = 0 and 18x + 6y + 26 = 0 have

(a)Unique solution

(b)Exactly two solutions

(c)Infinitely many solutions

(d)No solution

Answer: d

35. If the lines 3x+2ky – 2 = 0 and 2x+5y+1 = 0 are parallel, then what is the value of k?

(a)4/15

(b)15/4

(c)⅘

(d)5/4

Answer: (b)

36. If one equation of a pair of dependent linear equations is -3x+5y-2=0. The second equation will be:

(a)-6x+10y-4=0

(b)6x-10y-4=0

(c)6x+10y-4=0

(d)-6x+10y+4=0

Answer: a

37. To divide a line segment AB in the ratio 3:4, first, a ray AX is drawn so that ∠BAX is an acute angle and then at equal distances points are marked on the ray AX such that the minimum number of these points is:

(a)5

(b)7

(c)9

(d)11

Answer: b

38. To divide a line segment AB of length 7.6cm in the ratio 5:8, a ray AX is drawn first such that ∠BAX forms an acute angle and then points A1, A2, A3, ….are located at equal distances on the ray AX and the point B is joined to:

(a)A5

(b)A6

(c)A10

(d)A13

Answer: d

39. To construct a triangle similar to a given ΔPQR with its sides 5/8 of the similar sides of ΔPQR, draw a ray QX such that ∠QRX is an acute angle and X lies on the opposite side of P with respect to QR. Then locate points Q1, Q2, Q3, … on QX at equal distances, and the next step is to join:

(a)Q10 to C

(b)Q3 to C

(c)Q8 to C

(d)Q4 to C

Answer: (c)

40. To construct a triangle similar to a given ΔPQR with its sides, 9/5 of the corresponding sides of ΔPQR draw a ray QX such that ∠QRX is an acute angle and X is on the opposite side of P with respect to QR. The minimum number of points to be located at equal distances on ray QX is:

(a)5

(b)9

(c)10

(d)14

Answer: (b)

41. To construct a pair of tangents to a circle at an angle of 60° to each other, it is needed to draw tangents at endpoints of those two radii of the circle, the angle between them should be:

(a)100

(b)90

(c)180

(d)120

Answer: (d)

42. Of all the points of the feasible region, for maximum or minimum of objective function, the point lies

(a) inside the feasible region

(b) at the boundary line of the feasible region

(c) vertex point of the boundary of the feasible region

(d) none of these

Answer: (c)