Que. 1 18, 24, 21, 27, ?, 30, 27

(a) 33

(b) 30

(c) 24

(d) 21

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Que. 2 A is B's brother, C is A's mother, D is C's father, E is B's son, How is B related to D?

(a) Son

(b) Granddaughter

(c) Grandfather

(d) Great Grandfather

Que 3. Shyam goes 5 km in the North from his school. Now, turning to the left, he goes to 10 km and again turns to left and goes to 5 km. How far he is from his school and in which direction?

(a) 10 km, South from school

(b) 10 km, North from school

(c) 10 km, West from school

(d) 10 km, East from school

Que. 4 In the following series, which number will replace the question mark:

23, 29, 31, 37, 41, 43, ?

(a) 45

(b) 53

(c) 47

(d) 49

Que. 5 Sangeeta leaves from her home. She first walk 30 metres in North-West direction, and then 30m in South-West direction, next she walks 30 metres in South-East direction. Finally she turns towards her house. In which direction is she moving?

(a) North-West

(b) North-East

(c) South-East

(d) South-West

Que. 6 Find out the next number in the following series 7,11, 13, 17, 19, 23, 25, 29,?

(a) 30

(b) 31

(c) 32

(d) 33

Que. 7 A, B, C, D, E and F are sitting around a round table. A is between E and F, E is opposite to D, and C is not in either of the neighbouring seats of E. Who is opposite to B ?

(a) C

(b) D

(c) F

(d) None of these

(8-9) Read the following information and answer the given below it :

(i) A is the father of C, But C is not his son,

(ii) E is the daughter of C. F is the spouse of A .

(iii) B is the brother of C. D is the son of B.

(v) G is the spouse of B. H is the father of G

Que. 8 Who is the grand mother of D?

(a) A

(b) C

(c) F

(d) H

(8-9) Read the following information and answer the given below it :

(i) A is the father of C, But C is not his son,

(ii) E is the daughter of C. F is the spouse of A .

(iii) B is the brother of C. D is the son of B.

(v) G is the spouse of B. H is the father of G

Que. 9 **Who is son of F**

(a) B

(b) C

(c) D

(d) E

Que. 10 In a straight line there are six persons sitting in a row. B is between F and D. E is between A and C. A does not stand next to F or D, C does not stand next to D. F is between which of the following persons?

(a) B and E

(b) B and C

(c) B and D

(d) B and A

Que. 11 A person is facing towards North. He moves 70° clock-wise direction. Again he is moving 300° clock-wise direction. Now, in which direction is he presently facing ?

(a) North-West

(b) South-East

(c) North-East

(d) South-West

Ans. c

Que 12. Which of the following is not a type of sampling?

(a) Probability

(b) Non- Probability

(c) Stand-alone

(d) Mixed

Ans. c

USE MY CODE : SS12

Que 13. With the increase in sample size, the error also____

(a) decreases

(b) increases

(c) remains same

(d) all of the above

Ans. a

Que 14. It is 3'o clock in a watch. If the minute hand points towards the North-East then the hour hand will point towards the

(a) South

(b) South-West

(c) North-West

(d) South-East

Ans. d

Que 15. Y is in the East of X which is in the North of Z. If P is in the South of Z, then in which direction of Y, is P?

(a) North

(b) South

(c) South-East

(d) South-West

Ans. d

Que 16. A and B start moving towards each other from two places 200 m apart. After walked 60 m, B turns left and goes 20 m, then he turns right and goes 40 m. He then turns right again and comes back to the road on which he had started walking. If A and B walk with the same speed, what is the distance between them now?

(a) 20 m

(b) 30 m

(c) 40 m

(d) 50 m

Ans. c

Que 17. Sanjay has three daughters, and each daughter has a brother. How many male members are there in the family?

(a) 4

(b) 2

(c) 3

(d) 1

Ans. b

Que 18. Suresh's sister is the wife of Ram, Ram is Rani's brother. Ram's father is Madhur, Sheetal is Ram's grandmother, Rema is sheetal's daughter-in-law. Rohit is Rani's brother's son. Who is Rohit to Suresh?

(a) Brother-in-law

(b) Son

(c) Brother

(d) Nephew

Ans. d

Que 19. E is the son of A. D is the son of B. E is married to C. C is B's daughter. How is D related to E?

(a) Brother

(b) Uncle

(c) Brother-in-law

(d) Husband

Ans. c

Que 20. Introducing a boy a girl said, "He is the son of the daughter of the father of my uncle ". Who is the boy to the girl?

(a) Brother

(b) Nephew

(c) Uncle

(d) Son-in-law

Ans. a

Que 21 Five friends A, B, C, D and E are sitting in a row facing east. A is sitting between C & D. B is second to the left C. Who is sitting at the south end?

(a) B

(b) E

(c) A

(d) D

Que 22. In an Exhibition seven cars of different companies - Cadillac, Ambassador, Fiat, Maruti, Mercedes, Bedford and Fargo are standing facing to east in the following order :

1. Cadillac is next to right of Fargo.
2. Fargo is fourth to the right of Fiat.
3. Maruti car is between Ambassador and Bedford.
4. Fiat which is third to the left of Ambassador, is at one end.

Which of the cars are on both the sides of cadillac car?

(a) Ambassador and Maruti

(b) Maruti and Fiat

(c) Fargo and Mercedes

(d) Ambassador and Fargo

Que 23. Which of the following statement is correct?

(a) Maruti is next left of Ambassador.

(b) Bedford is next left of Fiat.

(c) Bedford is at one end.

(d) Fiat is next second to the right of Maruti.

Que 24. In a multiple choice question paper consisting of 100 questions of 1 mark each, a candidate gets 60% marks. If the candidate attempted all questions and there was a penalty of 0.25 marks for wrong answer, the difference between number of right answers and wrong answers is:

a. 32

b. 36

c. 40

d. 38

Que 25. Find the condition that one roots is double the other of $ax^2 + bx + c = 0$

a. $2b^2 = 3ac$

b. $b^2 = 3ac$

c. $2b^2 = 9ac$

d. $2b^2 > 9ac$

Que 26. If the sides of an equilateral triangle are shortened by 3 units, 4 units and 5 units respectively and a right triangle is formed then the sides of an equilateral triangle is

a. 6 units

b. 7 units

c. 8 units

d. 10 units

Que 27. If the roots of the equation $4x^2 - 12x + k = 0$ are equal, then the value of k is

a. -3

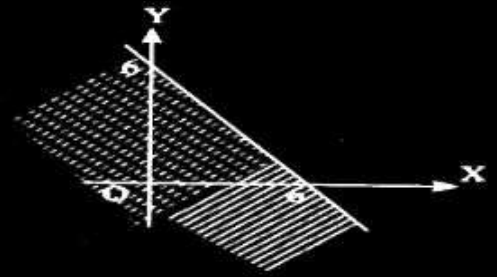
b. 3

c. -9

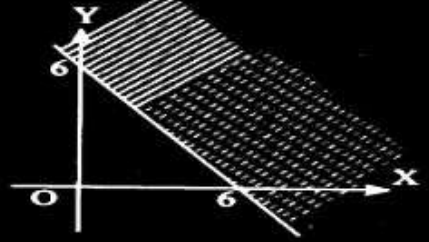
d. 9

Que. 28 Which of the following graph represents the in equality $x + y \leq 6$ is

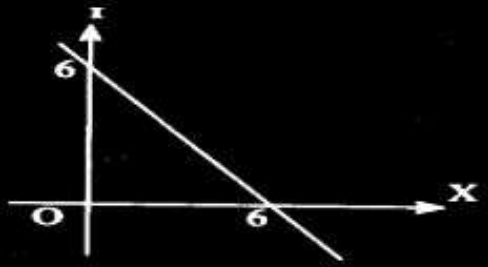
(a)



(b)



(c)



(d) None of these

Ans. a

USE MY CODE : SS12

Que 29. Find the range of real values of x satisfying the inequalities $3x - 2 > 7$ and $4x - 13 > 15$

a. $x > 3$

b. $x > 7$

c. $x < 7$

d. $x < 3$

b

Choose the most appropriate option (a), (b), (c) or (d)

Que 30. 10 examination papers are arranged in such a way that the best and worst papers never come together. The number of arrangements is

(a) $9\lfloor 8$

(b) $\lfloor 10$

(c) $8\lfloor 9$

(d) None of these

Que 31. How many ways can 5 different trophies be arranged on a shelf if one particular trophy must always be in the middle ?

(a) 24

(b) 48

(c) 120

(d) 144

a

Que 32. Three girls and five boys are to be seated in a row so that no two girls sit together. Total no. of ways of this arrangement are:

(a) 14400

(b) 120

(c) ${}^{5}P_{3}$

(d) 3! × 5!

a

Que 33. If ${}^{13}C_6 + 2\,{}^{13}C_5 + {}^{13}C_4 = {}^{15}C_x$ then, x =

(a) 6

(b) 7

(c) 8

(d) 9

a

Que 34. Out of 4 gents and 6 ladies, a committee is to be formed. Find the number of ways the committee can be formed such that it comprises of at least 2 gents and the number of ladies should at least be double of gents.

(a) 94

(b) 132

(c) 136

(d) 104

C

Que 35. If 20 AMs. are inserted between 3 and 51 then sum of these 20 A.M.s is

(a) 540

(b) 1080

(c) 270

(d) None of these

Ans. a

Que 36. Insert two Arithmetic means between 68 and 260

(a) 132,196

(b) 130,194

(c) 70,258

(d) None of the above

Ans. a

Que 37. If G be Geometric Mean between two numbers a and b, then the value of $\frac{1}{G^2-a^2}+\frac{1}{G^2-b^2}$ is equal to

(a) G^2

(b) $3G^2$

(c) $1/G^2$

(d) $2/G^2$

c

Que 38. If $y = 1 + x + x^2 + \ldots\ldots\ldots\ldots\ldots \infty$ then $x =$

(a) $(y - 1)/y$

(b) $(y + 1)/y$

(c) $y/(y + 1)$

(d) $y/(y - 1)$

a

Que 39. The sum of n terms of an AP is $3n^2 + 5n$. The series is

(a) 8, 14, 20, 26

(b) 8, 22, 42, 68

(c) 22, 68, 114, ...

(d) none of these

a

Que 40. If $f(x) = x + 2$, $g(x) = 7^x$, then g of (x) =

(a) $7x.x+2.\ 7x$

(b) 7^x+2

(c) $49(7^x)$

(d) None of these

Ans. c

Que 41. If A = {2, 3}, B = {4, 5}, C = {5, 6}, then A × (B ∩ C) = _____

a. {(5, 2), (5, 3)}

b. {(2, 5), (3, 5)}

c. {(2, 4), (3, 5)}

d. {(3, 5), (2, 6)}

b

Que 42. Let A = R - {3} and B = R - {1}. Let $f(x) \rightarrow B$ defined by $f(x) = (x - 2) / (x - 3)$. What is the value of $f^{-1}(1/2)$

a. 2/3

b. 3/4

c. -1

d. 1

Ans. d

Que 43. what is the value $\left(\frac{x^b}{x^c}\right)^{(b+c-a)} * \left(\frac{x^c}{x^a}\right)^{(c+a-b)} * \left(\frac{x^a}{x^b}\right)^{(a+b-c)}$

(A) $x^{(a+b+c)}$

(B) x^{abc}

(C) -1

(D) 1

ANS : D

Que 44 . The ratio of income of A and B is 5: 4 and their expenditure is 3 : 2. If at the end of year each saves ₹ 1,600, then the income of A is :

(A) ₹ 3,600

(B) ₹ 3,400

(C) ₹ 4,000

(D) ₹ 4,400

ANS : C

Que 45. The mean proportional between $12x^2$ and $27y^2$ is:

(A) 81xy

(B) 18xy

(C) 8xy

(D) 19.5xy

ANS : B

Que 46. $\log_2 \log_2 \log_4 256 + 2 \log_{\sqrt{2}} 2$ is equal to :

(A) 3

(B) 2

(C) 5

(D) 7

ANS : C

Que 47. If $x = 1 + \log_p qr$, $y = 1 + \log_q rp$ then $z = 1 + \log_r pq$ then the value of

$$\frac{1}{x} + \frac{1}{y} + \frac{1}{z} = \_\_\_\_\_$$

(a) 0

(b) 1

(c) -1

(d)3

Ans. b

Que 48. If $\frac{8^n \times 2^3 \times 16^{-1}}{2^n \times 4^2} = \frac{1}{4}$ then the value of n

(a) 1

(b) 3

(c) 3/2

(d) 2/3

Ans. c

Que 49. If xy + yz + zx = −1 then the value of $\left(\frac{x+y}{1+xy}+\frac{z+y}{1+zy}+\frac{x+z}{1+zx}\right)$ is:

(a) xyz

(b) −1 / yz

(c) 1 / xyz

(d) 1 / x + y + z

Ans. c

Que 50. If $\log_{10}5 + \log_{10}(5x + 1) = \log_{10}(x + 5) + 1$, then x is equal to

(a) 1

(b) 3

(c) 5

(d) 10

Ans. b

Que. 51 The Scarap value of machine valued at Rs, 10,00,000 after 15 yaers of depreciation is 10% per annmum .

(a) ₹ 215891.13

(b) ₹ 205891.13

(c) ₹ 225891.13

(d) None

Ans b

Que. 52 The effective annual rate of interest corresponding to nominal rate 6% p.a. payable quarterly is:

(a) 6.14%

(b) 6.07%

(c) 6.08%

(d) 6.09%

Ans a

Que. 53 Find the present value of an annuity of `1,000 payable at the end of each year for 10 years. If rate of interest is 6% compounding per annum. (given $(1.06)^{-10} = 0.5584$):

(a) ₹ 7,360

(b) ₹ 8,360

(c) ₹ 12,000

(d) None of these.

Ans.a

Que 54. The time by which a sum of money is 8 times of itself if it doubles itself in 15 years.

(a) 42 years

(b) 43 years

(c) 45 years

(d) 46 years

Ans. c

Que. 55 Assuming, that discount rate is 7% per annum, how much would you pay to receive Rs.50, growing at 5%, annually, forever.

(a) 2500

(b) 3000

(c) 3500

(d) 4000

Ans a

Que.56 Future value of Ordinary Annuity

(a) $A(n, i) = A\left[\frac{(1+i)^n - 1}{i}\right]$

(b) $A(n, i) = A\left[\frac{(1+i)^n + 1}{i}\right]$

(c) $A(n, i) = A\left[\frac{1-(1+i)^n}{i}\right]$

(d) $A(n, i) = A\left[\frac{(1+i)^n - 1}{i(1+i)^n}\right]$

Ans a

Que. 57 The ratio of principal and the compounded interest value for three years (Compounded annually) is 216 : 127. The rate of interest is:

(a) 0.1777

(b) 0.1567

(c) 0.1666

(d) 0.1587

Ans. c

Que. 58 The annual birth and death rates per 1,000 are 39.4 and 19.4 respectively. The number of years in which the population will be doubled assuming there is no immigration or emigration is:

(a) 35 years

(b) 30 years

(c) 25 years

(d) none of these

Ans. a

Que. 59 The population of a town increases by 2% of the population at the beginning of the year. The number of years by which the total increases in population would be 40% is:

(a) 7 years

(b) 10 years

(c) 17 years

(d) 19 years

Ans. c

Que 60. If the desired future value after 5 years with 18% interest rate is ₹ 1,50,000, then the present value (in ₹) is (Given that $(1.18)^5 = 2.2877$)

(a) ₹ 63,712

(b) ₹ 65,568

(c) ₹ 53,712

(d) ₹ 41,712

Ans. b

Que 61. Madhavi takes a loan of ₹ 50,000 from ABC bank. The rate of interest is 10% p.a. The first installment will be paid at the end of year 5. Determine the amount (in) of equal installments, if Madhavi wishes to repay the amount in five installments.

(a) ₹ 19,310

(b) ₹ 19,410

(d) ₹ 19,510

(d) ₹ 19,610

Ans. a

Que. 62 In tabulation, source of data, if any is shown in the :

(a) Stub

(b) Body

(c) Caption

(d) Footnote

Ans. d

Que. 63 In the data group Bowley's and Laspeyre's index number is as follows. Bowley's index number = 150, Laspeyre's index number = 180 then Paasche's index number is:

(a) 120

(b) 30

(c) 165

(d) None of these

Ans. a

Que. 64 Find the Expected value of the following distribution

x	-20	-10	30	75	80
P(x)	3/20	1/5	1/2	1/10	1/20

(a) 20.5

(b) 21.5

(c) 22.5

(d) 24.5

Ans. b

Que. 65 The pair of averages whose value can be determined graphically.

(a) Mean and Median

(b) Mode and Mean

(c) Mode and Median

(d) None of these

Ans. c

Que. 66 ‘Stub’ of a table is the _____ part of the table describing the _____.

(a) Left, Columns

(b) Right, Columns

(c) Right, Rows

(d) Left, Rows

Ans. d

Que. 67 In a class of 11 students, 3 students were failed in a test. 8 students who passed secured 10,11,20,15,12,14,26 and 24 marks respectively. What will be the median marks of the students

(a) 12

(b) 15

(c) 13

(d) 13.5

Ans. a

Que 68. Origin is shifted by 5, then

(a) SD will increase by 5

(b) QD will increase by 5

(c) MD will increase by 5

(d) There will be no change in SD

Ans. d

Que. 69 Two unbiased dice are thrown. The expected value of sum of numbers on the upper side is

(a) 3.5

(b) 7

(c) 12

(d) 6

Ans. b

Que. 70 An example of bi-parametric continuous probability distribution.

(a) Binomial

(b) Poisson

(c) Normal

(d) (a) and (b)

Ans. c

Que. 71 The theory of compound probability states that for any two events A and B:

(a) $P(A \cap B) = P(A) \times P(B)$

(b) $P(A \cap B) = P(A) \times P(B/A)$

(c) $P(A \cup B) = P(A) \times P(B/A)$

(d) $P(A \cup B) = P(A) + P(B) - P(A \cap B)$

Ans. b

Que.72 A card is drawn from a well shuffled pack of 52 cards. Let E, "a king or a queen is drawn" & E_2: "a queen or a jack is drawn", then:

(a) E_3 and E_2 are not independent

(b) E_1 and E_2 are mutually exclusive

(c) E_1 and E_2 are independent

(d) None of these

Ans. a

Que. 73 A manufacturer, who produces medicine bottles, finds that 0.1 % of the bottles are defective. The bottles are packed in boxes containing 500 bottles. A drug manufacturer buys 100 boxes from the producer of bottles. Using Poisson distribution, find how many boxes will contains at least two defectives: [Given: $e^{-0.5} = 0.6065$]

(a) 7

(b) 13

(c) 9

(d) 11

Ans. c

Que.74 The mean of Binomial distribution is 20 and Standard deviation is 4 then;

(a) n = 100, p = 1/5, q = 4/5

(b) n = 50, p = 2/5, q = 2/5

(c) n = 100, p = 2/5, q = 4/5

(d) n = 100, p = 1/5, q = 3/5

Ans. a

Que 75. Given the regression equations as $3x + y = 13$ and $2x + 5y = 20$. Find regression equation of y on x.

(a) $3x + y = 13$

(b) $2x + Y = 20$

(c) $3x + 5y = 13$

(d) $2x + 5y = 20$

Ans. d

Que 76. To find the distribution of number of airplanes crashing every hour in the world, which of the following distribution is appropriate to apply:

(a) Normal distribution

(b) Binomial distribution

(c) Poisson distribution

(d) Using any of the above will yield the same output

Ans. C

Que 77. Coefficient of Quartile Deviation is 1/4 then Q_3/Q_1 =?

(a) 5/3

(b) 4/3

(c) 3/4

(d) 3/5

Ans. a

Que 78. Area between −1.96 to +1.96 in a normal distribution is:

(a) 95.45%

(b) 95%

(c) 96%

(d) 99%

Ans. b

Que 79. The probability that a student is not a swimmer is ⅕, then the probability that out of five students four are swimmer is:

(a) $\left(\frac{4}{5}\right)^4\left(\frac{1}{5}\right)$

(b) ${}^5C_1\left(\frac{1}{5}\right)^4\left(\frac{4}{5}\right)$

(c) ${}^5C_4\left(\frac{4}{5}\right)^4\left(\frac{1}{5}\right)$

(d) None of these

Ans. C

USE MY CODE : SS12

Que 80. AM of regression coefficient is:

(a) Equal to r

(b) Greater than or equal to r

(c) half of r

(d) None of these

Ans. b

Que 81. If the standard deviation of 1, 2, 3, 4, ...10 is σ, then the standard deviation of 11, 12, 13, 14, ... 20 is:

(a) 10σ

(b) 10 + σ

(c) σ

(d) None of these

Ans. c

Que 82. Which measure of dispersion is base on the absolute deviation only?

(a) Range

(b) Standard Deviation

(c) Mean Deviation

(d) Quartile Deviation

Ans. c

Que 83. A card is drawn from a pack of playing cards and then another card is drawn without the first being replaced. What is the probability of getting two kings:

(a) 7/52

(b) 1/221

(c) 3/221

(d) None of these

Ans. b

Que 84. Examine the validity of the following: Mean and standard deviation of a binomial distribution are 10 and 4 respective:

(a) Not Valid

(b) Valid

(c) Both [a] and [b]

(d) Neither [a] nor [b]

Ans. a

Que 85. Relative frequency for a particular class lies between:

(a) 0 and 1

(b) 0 and 1, both inclusive

(c) -1 and 0

(d) -1 and 1

Ans. a

Que 86. For 10 pairs of observations, number of concurrent deviations was found to be 4. What is the value of the coefficient of concurrent deviation?

(a) $\sqrt{0.2}$

(b) 1/3

(c) -1/3

(d) $-\sqrt{0.2}$

Ans. c

Que 87. For a m × n two way or bivariate frequency table the maximum number of marginal distribution is coefficient

(a) 1

(b) 2

(c) m + n

(d) mn

Ans. b

Que 88. If there are three observations 15, 20,25 then the sum of deviation of the observations from their AM is.

(a) 0

(b) 5

(c) -5

(d) 10

Ans. a

Que 89. If the plotted points in a scatter diagram lie from upper left to lower right, then the correlation is

(a) Positive

(b) Zero

(c) Negative

(d) none of these.

Ans. c

Que 90. Assume that the probability for rain on a day is 0.4. An umbrella salesman can earn ₹ 400 per day in case of rain on that day will lose ₹ 100 per day if there is no rain. The expected earnings (in ₹) per day of the salesman is

(a) 400

(b) 200

(c) 100

(d) 0

Ans. c

Que. 91 If Standard Deviation is 1.732 then what is the value of poisson distribution. The P[−2.48 < x < 3.54] is

(a) 0.73

(b) 0.65

(c) 0.86

(d) 0.81

Ans. b

Que 92. A renowned hospital usually admits 200 patients everyday. One percent patients, on an average, require special room facilities. On one particular morning, it was found that only one special room is available. What is the probability that more than 3 patients would require special room facilities?

(a) 0.1428

(b) 0.1732

(c) 0.2235

(d) 0.3450

Ans. a

Que 93. From which graphical representation , we can calculate partition values ?

(a) Lorenz Curve

(b) Ogive Curve

(c) Histogram

(d) None of the above

Ans. b

Que 94. The share holding pattern of ABC Ltd. b as follows:

Share holders	Promoter	FII	MF	Other	Public
No. Of shares insomnious	120	25	20	20	15

What is the difference between central angles of Promoters and public in pie chart?

(a) 216

(b) 189

(c) 180

(d) 99

b

Que. 95 Consider the data

Year	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	10	5	20	2
B	15	4	25	8
C	40	2	60	6
D	25	3	40	4

Laspeyre's Index is:

(a) 166.04

(b) 156.04

(c) 164.06

(d) 154.06

Que. 96 A class consists of 10 boys and 20 girls of which half the boys and half the girls have blue eyes. Find the probability that a student chosen random is a boy and has blue eyes.

(a) 1/6

(b) 3/5

(c) 1/2

(d) none of these

a

Que. 97 If the correlation coefficient between the variables X and Y is 0.5, then the correlation coefficient between the variables u = 2x - 4 and v= 3 -2y is

(a) 1

(b) 0.5

(c) -0.5

(d) 0

Ans. c

Que. 98 The harmonic mean A and B is 1/3 and harmonic mean of C and D is 1/5. The harmonic mean of A ,B ,C ,D is

(a) 8/15

(b) 1/4

(c) 1/15

(d) 5/3

b

Que. 99 Find the gradient of the curve $y = 3x^2 - 6x + 4$ at the point (1, 2)

(a) 1

(b) -1

(c) 0

(d) 2

Ans. c

Que.100 $\int_1^2 \frac{2x}{1+x^2}dx$ is equal to

(a) $\log_e(5/2)$

(b) $\log_e 5 - \log_e 2 + k$

(c) $\log_e(2/5)$

(d) none of these

Ans. a

USE MY CODE : SS12