

Prepp

Your Personal Exams Guide



NDA



CDS



SSC CGL



CBSE UGC NET



IAS



SSC CHSL



CTET



MPSC



AFCAT



CSIR UDC NET



IBPS PO



UP POLICE



SSC MTS



SBI PO



BPS



UP TET



IBPS RRB



IBPS CLERK



IES



UPSC CAPF



SSC Stenogr..



RRB NTPC



SSC GD



RBI GRADE B



RBI Assistant



DSSSB

RRB Group D 2022 Prev. Yr. Paper (17 Aug 2022) (Shift 3)

Total Time: 1 Hour : 30 Minute

Total Marks: 100

Instructions

Sl No.	Section Name	No. of Question	Maximum Marks
1	CBT	100	100

- 1.) A total of 90 minutes is allotted for the examination.
- 2.) The server will set your clock for you. In the top right corner of your screen, a countdown timer will display the remaining time for you to complete the exam. Once the timer reaches zero, the examination will end automatically. The paper need not be submitted when your timer reaches zero.
- 3.) There will, however, be sectional timing for this exam. You will have to complete each section within the specified time limit. Before moving on to the next section, you must complete the current one within the time limits.

Your Personal Exams Guide

CBT

1. The resistivity of a material is dependent on which of the following factors? (+1, -0.33)
- a. Resistance
 - b. Area of cross section
 - c. Length
 - d. Temperature
-
2. Arrange the following metals in the decreasing order of reactivity: K, Na, Zn, Cu, Hg, Ag (+1, -0.33)
- a. K > Na > Zn > Cu > Hg > Ag
 - b. K > Na > Zn > Ag > Hg > Cu
 - c. K > Na > Zn > Cu > Ag > Hg
 - d. K > Na > Zn > Hg > Cu > Ag
-
3. Amit's son was born on 10 January 2012. On what day of the week was he born? (+1, -0.33)
- a. Monday
 - b. Tuesday
 - c. Wednesday
 - d. Thursday
-

4. Identify the personality from among the following who received the Padma Shri 2022 award in the sports field. (+1, -0.33)

- a. Shivrath Mishra
- b. Shaibal Gupta
- c. Avani Lekhara
- d. Tara Jauhar

5. Which of the following has the maximum non-metallic characters in group 16 elements? (+1, -0.33)

- a. Polonium (Po)
- b. Oxygen (O)
- c. Sulfur (S)
- d. Selenium (Se)

6. Panchayati Raj Institutions in India have been established following which amendment of the Constitution of India? (+1, -0.33)

- a. 42nd Amendment Act
- b. 57th Amendment Act
- c. 64th Amendment Act
- d. 73rd Amendment Act

7. Which of the following substances are selectively reabsorbed from the initial filtrate by the tubular portion of the nephron in the human kidney? (+1, -0.33)
- a. Salts, glucose, fats, and water
 - b. Glucose, water, amino acids, and proteins
 - c. Glucose, water, salts, and amino acids
 - d. Water, glucose, salts, and proteins
-

8. Which of the following rules is used to determine the direction of induced current due to the motion of a coil at right angle to the magnetic field? (+1, -0.33)
- a. Fleming's left-hand rule
 - b. Maxwell's corkscrew rule
 - c. Right-hand thumb rule
 - d. Fleming's right-hand rule
-

9. In a certain code language, PRECIOUS is written as KIVXRLFH and CLEAR is written as XOVZI. How will DIRTYING be written in the same language? (+1, -0.33)
- a. WRIFBRMS
 - b. WRIGBRMT
 - c. WHSGBRMT
 - d. VRIGBROT
-

10. If $2 \times X \times 412 \times 83 = 161$, then the value of X is:

(+1, -0.33)

- a. 14
- b. 12
- c. 11
- d. 13

11. Three statements are followed by three conclusions numbered I, II, and III.

(+1, -0.33)

You have to consider these statements to be true, even if they seem at variance from commonly known facts. Decide which of the given conclusions logically follows from the given statements.

Statements:

- 1. All springs are brooks.
- 2. Some brooks are creeks.
- 3. No creek is tap.

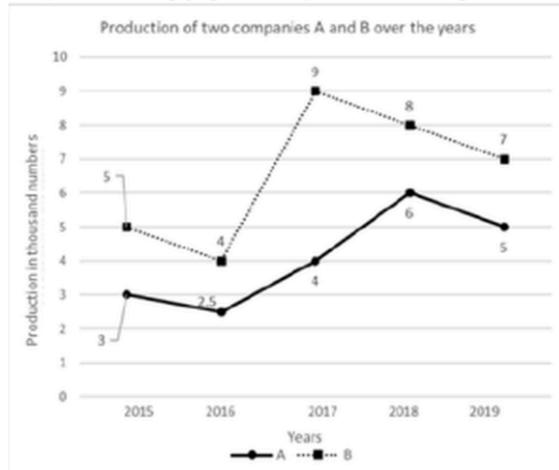
Conclusions:

- I. Some taps are creeks.
 - II. No spring is a tap.
 - III. Some brooks are springs.
- a. Only conclusion III follows.
 - b. Only conclusion I follows.
 - c. Only conclusions I and II follow.
 - d. Only conclusions II and III follow.

-
12. Which of the following is an example of a human cell that has the ability to modify its shape? (+1, -0.33)
- a. WBC
 - b. RBC
 - c. Liver cells
 - d. Brain cell

-
13. From point X, a girl walks 70 m towards the north. Then, she takes a left turn and walks 150 m. Then, she takes a left turn and walks 70 m. Then, she takes another left turn and walks 90 m. She then takes a right turn and walks 100 m. Finally, she takes a left turn and walks 60 m to reach point Z. How far and in which direction is point Z from point X? (All turns are 90-degree turns only) (+1, -0.33)
- a. 60 m, North
 - b. 60 m, South
 - c. 100 m, North
 - d. 100 m, South

-
14. Study the following graph carefully and answer the question: Production of two companies A and B over the years. (+1, -0.33)



For company A, what is the approximate percentage decrease in production from 2015 to 2016?

- a. 25%
- b. 15%
- c. 20%
- d. 22%

15. A cost incurred in the past and that cannot be recovered in the future is called: (+1, -0.33)

- a. Floating cost
- b. Prime cost
- c. Economic cost
- d. Sunk cost

16. A convex mirror used as a rear-view mirror of a car has a focal length of 2 m. If a bus is located at a distance of 3 m from the mirror, where will its (+1, -0.33)

image be formed?

- a. 0.83 m in front of the mirror
- b. 1.2 m in front of the mirror
- c. 0.83 m behind the mirror
- d. 1.2 m behind the mirror

17. A white precipitate will be formed if we add ammonia solution to: (+1, -0.33)

- a. $\text{Mg}(\text{NO}_3)_2$ solution
- b. KNO_3 solution
- c. AlCl_3 solution
- d. $\text{Ba}(\text{NO}_3)_2$ solution

18. The bluish colour of water in deep sea is due to: (+1, -0.33)

- a. Scattering of light
- b. Refraction of light
- c. Dispersion of light
- d. Reflection of light

19. If θ is an acute angle, find the denominator A, when $(\text{cosec } \theta - \cot \theta)^2 = \frac{1 - \cos \theta}{A}$ (+1, -0.33)

- a. $\operatorname{cosec} \theta - 1$
 - b. $1 + \sin \theta$
 - c. $\cot \theta$
 - d. $1 + \cos \theta$
-

20. Amna has a younger sister whose age is 8 years less than that of Aruna. If Aruna's sister's age is 18 years, then Aruna's age is: (+1, -0.33)

- a. 10 years
 - b. 24 years
 - c. 26 years
 - d. 28 years
-

21. How many participants from India won the gold medal in the 14th International Olympiad on Astronomy and Astrophysics (IOAA) 2021? (+1, -0.33)

- a. 3
 - b. 5
 - c. 4
 - d. 6
-

22. The 'Save the Narmada' movement originated as a protest against raising the height of Sardar Sarovar Dam. Some disadvantages of building dams are mentioned below. Which one is an advantage? (+1, -0.33)

- a. Lot of public money is used
- b. Many tribals and peasants are displaced
- c. Causes deforestation and loss of biodiversity
- d. Helpful in irrigation and electricity production

23. The HCF of two numbers is 7 and their LCM is 434. If one of the numbers is 14, find the other. (+1, -0.33)

- a. 146
- b. 217
- c. 48
- d. 52

24. The sum of the roots of the quadratic equation $4x^2 + 7x - 21 = 0$ is: (+1, -0.33)

- a. $21/4$
- b. $7/4$
- c. $-7/4$
- d. $-21/4$

25. What will come in place of A and B, respectively, in the given double displacement reaction? (+1, -0.33)



- a. Ag and HNO_3

- b. HBr and NaOH
 - c. AgNO₃ and KBr
 - d. HBr and NaNO₃
-

26. If $5 + x$, $2x + 7$, $6x + 9$, and y are in proportion when $x = 2$, find the value of y . (+1, -0.33)
- a. 42
 - b. 33
 - c. 28
 - d. 45
-

27. Gosikhurd National Irrigation Project is related to which of the following states? (+1, -0.33)
- a. Punjab
 - b. West Bengal
 - c. Uttar Pradesh
 - d. Maharashtra
-

28. Soil degradation is one of the major environmental problems being faced these days. A wide range of techniques to conserve soil are mentioned below. Select the INCORRECT option. (+1, -0.33)
- a. Crop rotation

- b. Terrace farming
 - c. Planting trees
 - d. Overgrazing
-

29. In which organism is sex not determined genetically? (+1, -0.33)

- a. Butterfly
 - b. Moth
 - c. Sparrow
 - d. Snail
-

30. The age of a father six years ago was six times the then age of his daughter. Three years hence, the father will be thrice as old as his daughter. What is the present age of the daughter? (+1, -0.33)

- a. 12 years
 - b. 17 years
 - c. 15 years
 - d. 20 years
-

31. The 'Mango Showers' phenomenon in India is related to which season? (+1, -0.33)

- a. Winter
- b. Summer

- c. Autumn
 - d. Rainy
-

32. If 12 is subtracted from each odd digit and 1 is added to each even digit in the number 83252769, how many digits will occur more than once in the new number thus formed? (+1, -0.33)

- a. Three
 - b. None
 - c. Two
 - d. One
-

33. Study the given letter-symbol series and answer the question that follows: (+1, -0.33)

L@S*E^BU#WI<EM@OS#B*H!A&L<O

If we replace each of the vowels with any consonant and similarly if we replace each of the consonants in the original series with any vowel, then how many consonants will be immediately followed by a symbol in the resultant series thus formed?

- a. 6
 - b. 5
 - c. 4
 - d. 7
-

34. Which of the following statements is FALSE? (+1, -0.33)

- a. Pyruvic acid is produced in the first stage of respiration.
 - b. Oxygen is not necessary for the fermentation process.
 - c. In the mitochondria, acetic acid is broken down utilizing oxygen.
 - d. In the first stage of respiration, breakdown of glucose takes place.
-

35. Two wires A and B are made of the same material and have the same length but different cross-sectional areas. If the resistance of wire A is 16 times the resistance of wire B, the ratio of the cross-sectional area of wire A to that of wire B is: (+1, -0.33)

- a. 4:1
 - b. 16:1
 - c. 1:4
 - d. 1:16
-

36. X and Y can complete a piece of work in 8 days and 12 days, respectively. If they work on alternate days, with X working on the first day, how long will it take the duo to complete the work? (+1, -0.33)

- a. $9\frac{1}{3}$ days
 - b. $9\frac{2}{3}$ days
 - c. $9\frac{3}{2}$ days
 - d. $9\frac{1}{2}$ days
-

37. In the given letter-cluster pairs, the first letter-cluster is related to the second letter-cluster following a certain logic. Study the given pairs carefully, and from the given options, select the pair that follows the same logic. (+1, -0.33)

TORPEDO : DEOOPRT

FLICKER : CEFIKLR

- a. PERTAIN : AEINPRT
- b. CURTAIN : RUCNIAT
- c. CLOSURE : OLCERUS
- d. CYNICAL : ACCLINY

38. In this question, a statement is followed by two conclusions. Which of the two conclusions is/are true with respect to the statement? (+1, -0.33)

Statement: $T > G < E > F = B = Z$

Conclusions:

I. $F = Z$

II. $E = B$

- a. Only conclusion II is true
- b. Both conclusions I and II are true
- c. Neither conclusion I nor II is true
- d. Only conclusion I is true

39. Venkat bought a second-hand scooter and spent 10% of the cost on its repairs. He sold the scooter for a profit of ₹2,200. How much did he spend on repairs if he made a profit of 20%? (+1, -0.33)

- a. ₹3,750
 - b. ₹1,000
 - c. ₹400
 - d. ₹2,100
-

40. The present ages of Shanthi and Keerthi are in the ratio of 7:3. After 5 years, Shanthi's age will be 40. How old will Keerthi be after 5 years? (+1, -0.33)

- a. 20 years
 - b. 10 years
 - c. 15 years
 - d. 30 years
-

41. A man travels 80 km in three hours. He further travels for two more hours. Find the distance travelled in the latter two hours if his average speed for the entire journey is 30 km/h. (+1, -0.33)

- a. 150 km
 - b. 70 km
 - c. 120 km
 - d. 90 km
-

42. Refer to the following letter series and answer the question: (+1, -0.33)
TYANECMKEWAFHEQAPMNBEDHEKUWSDANMAWE
How many such consonants are there in the series which are

immediately preceded by a vowel and also immediately followed by a vowel?

- a. Five
- b. Four
- c. Six
- d. Three

43. Each of W, X, Y, Z, A, B, and C has a wedding to attend on a different day of a week starting from Monday to Sunday. C has to attend the wedding immediately after A. Y has to attend a wedding on one of the days before B and W. Only Z has to attend a wedding before A. X has to attend a wedding on Friday. B does not have to attend a wedding on Sunday. On which day of the week does Y have to attend a wedding? (+1, -0.33)

- a. Saturday
- b. Thursday
- c. Sunday
- d. Wednesday

44. On which day is a major national festival celebrated every year to commemorate the enactment of the Constitution of India, which declared India to be a sovereign, democratic, and republic state? (+1, -0.33)

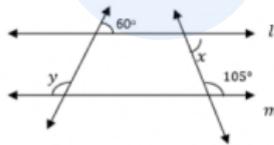
- a. 26th January
- b. 15th August
- c. 2nd October

d. 23rd March

45. KK Venugopal, the 15th Attorney General of India, received the first extension in his tenure in which of the following years? (+1, -0.33)

- a. 2021
- b. 2019
- c. 2022
- d. 2020

46. In the adjoining figure, line l is parallel to m . What is the value of $2x + y$? (+1, -0.33)



- a. 270°
- b. 150°
- c. 225°
- d. 320°

47. Three statements are followed by four conclusions numbered I, II, III, and IV. You have to consider these statements to be true, even if they seem at variance from commonly known facts. Decide which of the given conclusions logically follows from the given statements. (+1, -0.33)

Statements:

1. Some carnations are petunias.
2. All petunias are sunflowers.
3. Some sunflowers are not carnations.

Conclusions:

- I. Some sunflowers are carnations.
- II. All carnations are sunflowers.
- III. All petunias are carnations.
- IV. No sunflower is a carnation.

- a. Only conclusion I follows
- b. Only conclusions I and IV follow
- c. Only conclusions II and III follow
- d. Only conclusion IV follows

48. If the sum of the roots of the quadratic equation $5x^2 + bx + 4 = 0$ is 9, then find the value of b. (+1, -0.33)

- a. 9
- b. 20
- c. -45
- d. -25

49. A shopkeeper sold a book at a loss of 14%. If the selling price had been increased by ₹100, there would have been a gain of 6%. What was the cost price of the book? (+1, -0.33)

- a. ₹2,500
- b. ₹2,450

c. ₹2,650

d. ₹3,970

50. Guard cells are involved in the process of: (+1, -0.33)

a. Transport of food

b. Tropic movements

c. Transpiration

d. Circulation

51. If $\frac{x}{y} = \frac{3}{2}$ then find the value of $x^2 + y^2/x^2 - y^2$ (+1, -0.33)

a. 13/5

b. 5

c. 7

d. 9

52. A student focuses a sharp image of the sun using a spherical mirror on a sheet of paper, which starts to burn after some time. Which of the following statement/statements about the mirror is/are correct? (+1, -0.33)

(a) It is a concave spherical mirror

(b) It has a positive focal length

(c) It is a converging mirror

- a. Both (b) and (c)
 - b. Both (a) and (c)
 - c. Both (a) and (b)
 - d. (a), (b), and (c)
-

53. In February 2022, which state launched the open-air classroom 'Paray Shikshalaya'?

(+1, -0.33)

- a. West Bengal
 - b. Punjab
 - c. Haryana
 - d. Kerala
-

54. A man travelled at a speed of 20 m/min for 100 min and at a speed of 70 m/min for 50 min. His average speed is:

(+1, -0.33)

- a. 35 m/min
 - b. 22 m/min
 - c. 25 m/min
 - d. 50 m/min
-

55. Four friends Ramniwas, Ramesh, Ramsingh, and Raman received their PhD degrees in consecutive months of the same year. Ramniwas received his degree exactly one month prior to Ramsingh. Raman received his degree exactly one month after Ramesh. Ramniwas received

(+1, -0.33)

his degree in September, and Raman did not obtain his degree before Ramniwas. In which month did Ramesh receive his degree?

- a. November
- b. October
- c. August
- d. December

56. A statement is given followed by two assumptions numbered I and II. You have to assume everything in the statement to be true and decide which of the given assumptions is/are implicit in the statement. (+1, -0.33)

Statement: "The demand for smartphones and laptops has increased substantially since the introduction of online classes in schools."

Assumptions:

- I. People are buying smartphones and laptops to enable their children to attend online classes.
- II. Desktop computers cannot be used to attend online classes.

- a. Neither assumption I nor II is implicit
- b. Both assumptions I and II are implicit
- c. Only assumption II is implicit
- d. Only assumption I is implicit

57. Which of the following alphanumeric clusters will replace the question mark (?) in the series to make it logically complete? (+1, -0.33)

1AZC2, 3DYF4, 7GXIS, ?

- a. 13DK14

- b. 13IWK14
- c. 15IVK16
- d. 15TWL16

58. Eight friends, A, B, C, D, E, F, G, and H, are sitting around a square table (+1, -0.33)
facing the center. Four are at the corners, while the other four sit at the
middle of the sides. Both A and C sit at opposite corners. F and D sit at
opposite corners. Only G is between A and F. Only B is between A and D. H
is to the immediate left of C. G is to the immediate right of F. E is second
to the right of H. D is second to the left of C. Who is sitting second to the
left of B?

- a. H
- b. G
- c. E
- d. F



Your Personal Exams Guide

59. Study the given letter-symbol series and answer the question that (+1, -0.33)
follows:

L@S*JI"BU#WR<E@NS#B*H!A&L<WQ

How many symbols are immediately followed by a consonant and
immediately preceded by a vowel?

- a. 0
- b. 3
- c. 1
- d. 4

60. Ram is 55 years old, and Som is 25 years old. How many years ago was Ram three times as old as Som? **(+1, -0.33)**
- a. 7 years
 - b. 10 years
 - c. 15 years
 - d. 5 years
-

61. Gayatri starts walking from her home and goes 100 m south. She then turns right and walks 120 m. She then turns right and walks 100 m. Finally, she turns right again and walks 150 m. How far is she now from the starting point? (All turns are 90 degrees) **(+1, -0.33)**
- a. 150 m
 - b. 100 m
 - c. 60 m
 - d. 90 m
-

62. What is the area of an equilateral triangle whose each side is 14 cm long? **(+1, -0.33)**
- a. $49\sqrt{3} \text{ cm}^2$
 - b. $14\sqrt{3} \text{ cm}^2$
 - c. $21\sqrt{3} \text{ cm}^2$
 - d. $35\sqrt{3} \text{ cm}^2$
-

-
63. In March 2022, which bank did RBI direct to stop onboarding new customers? (+1, -0.33)
- a. Airtel Payment Bank
 - b. Ujjivan Small Finance Bank
 - c. AU Small Finance Bank
 - d. Paytm Payments Bank

-
64. In a certain code language, TRY is written as 63 and NOT is written as 40. How will DUG be written in the same language? (+1, -0.33)
- a. 30
 - b. 40
 - c. 36
 - d. 32

-
65. A statement is given, followed by four conclusions. Find out which conclusion is true based on the given statement. (+1, -0.33)
- Statement: $G = P > T > S > K = N < D$
- a. $G > D$
 - b. $G > T$
 - c. $P > D$
 - d. $N > T$

66. Which of the following is the commercial unit of electric energy? (+1, -0.33)
- a. Kilowatt hour
 - b. Joule
 - c. Calorie
 - d. Watt second
-

67. Gohan Singh Bhakna was the first president of which organization, founded by Indians in the United States in 1913? (+1, -0.33)
- a. Indian Revolutionary Party
 - b. Ghadar Party
 - c. Swaraj Party
 - d. Swatantra Party
-

68. Which of the following numbers will replace the question mark (?) in the given series? (+1, -0.33)
14, 14, 17, 85, 92, ?
- a. 1828
 - b. 628
 - c. 418
 - d. 924
-

69. What is the direction of the Inter-Tropical Convergence Zone in winter? (+1, -0.33)
- a. Northward
 - b. Southward
 - c. Westward
 - d. Eastward
-

70. Which of the following is NOT a direct tax in India? (+1, -0.33)
- a. Income Tax
 - b. Capital Gains Tax
 - c. Excise Tax
 - d. Corporate Tax
-

71. P, Q, R, S, and T are sitting in a straight line, facing north. S is an immediate neighbor of both P and R. R is an immediate neighbor of both S and Q. Q is an immediate neighbor of both R and T. Who are the immediate neighbors of Q? (+1, -0.33)
- a. P and R
 - b. S and T
 - c. R and T
 - d. S and R
-

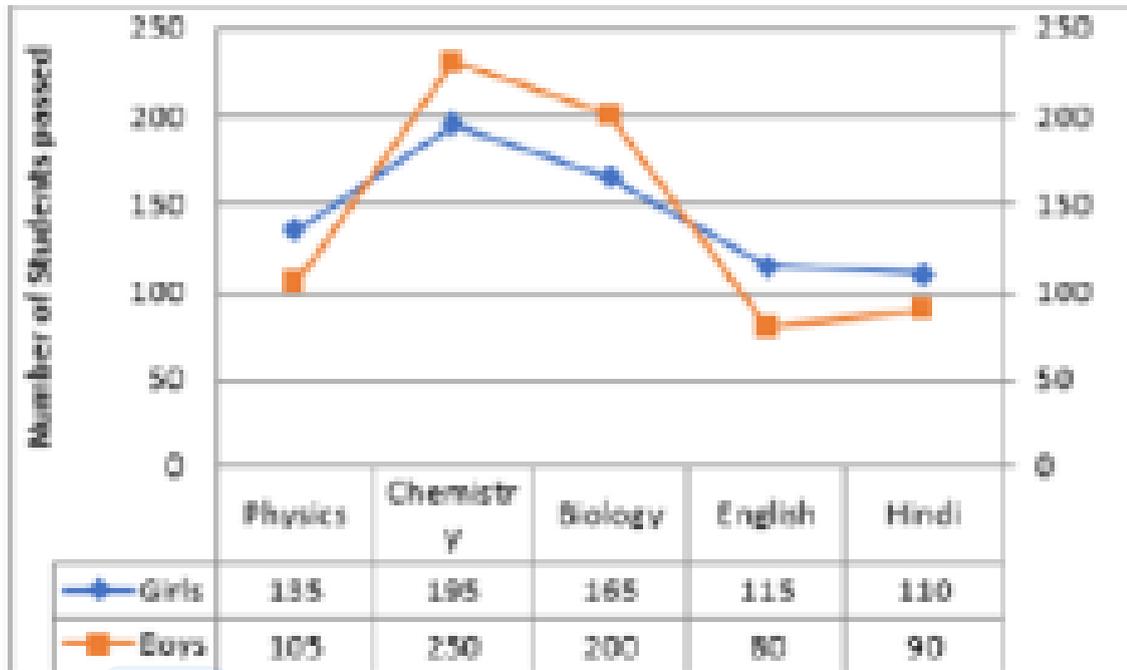
72. The value of $0.16 + 0.15 - 0.13$ is: (+1, -0.33)

- a. 0.18
- b. 0.22
- c. 0.63
- d. 0.45

73. Ayan invested ₹75,000 at a rate of 7.5% per annum simple interest for 6 years. Find the amount he will receive after 6 years. (+1, -0.33)

- a. ₹1,12,500
- b. ₹36,000
- c. ₹75,000
- d. ₹1,08,750

74. The graph and table below show the number of boys and girls passed in five different subjects: Physics, Chemistry, Biology, English, and Hindi. (+1, -0.33)



What is the ratio of the girls who have passed in Physics, Chemistry, and Biology, respectively?

- a. 9:13:11
- b. 9:15:13
- c. 9:13:8
- d. 8:11:14

75. What will come in place of the question mark (?) in the following equation, if '-' is interchanged with '*' and '=' is interchanged with '+': (+1, -0.33)
 $8 - 2 * 3 + 5 = 20$

- a. 43
- b. 38
- c. 47

d. 11

76. Which of the following situations is/are possible? (+1, -0.33)
- (a) Magnetic field lines can be parallel to each other.
 - (b) Magnetic field lines can be concentric circles.
 - (c) Magnetic field lines can intersect each other.
- a. Only (b)
 - b. Both (a) and (b)
 - c. Both (a) and (c)
 - d. Only (a)
-

77. Which of the following is the prominent language spoken by 5.03% of the population of India as per the 2011 census? (+1, -0.33)
- a. Punjabi
 - b. Gujarati
 - c. Marathi
 - d. Bengali
-

78. Which of the following numbers will replace the question mark (?) in the given series? (+1, -0.33)
- 3, 7, 13, 21, 31, ?
- a. 43
 - b. 41
-

c. 42

d. 44

79. In which year was the Steel Authority of India incorporated? (+1, -0.33)

a. 1979

b. 1982

c. 1987

d. 1973

80. V, W, X, Y, Z, and A are six singers who have their concerts on different days of the same month, viz. 12th, 14th, 16th, 21st, 25th, and 31st of July. W has his concert on one of the days before X, but not on the 21st. V has his concert on the 14th. Only A has his concert after Y. X has his concert before V. Who has the concert on the 21st of July? (+1, -0.33)

a. V

b. X

c. Y

d. A

81. Find the number of 2-digit numbers divisible by both 2 and 4. (+1, -0.33)

a. 10

b. 22

c. 42

d. 32

82. Who was conferred with the Major Dhyan Chand Khel Ratna Award 2021 for his outstanding achievements in para-shooting? (+1, -0.33)

a. Harmanpreet Singh

b. Praveen Kumar

c. Sharad Kumar

d. Manish Narwal

83. Which of the following is NOT a use of bleaching powder? (+1, -0.33)

(i) To make drinking water free from germs

(ii) In soda-acid fire extinguishers

(iii) As an oxidizing agent in many chemical industries

(iv) For baking cakes

a. (iv)

b. (ii)

c. (iii)

d. (i)

84. Which of the following features says that people of India have a direct role in electing their representatives? (+1, -0.33)

- a. Parliamentary Form of Government
- b. Secularism
- c. Fundamental Rights
- d. Separation of Powers

85. A ray of light is incident on an interface separating two media along the normal to the interface. The angle between the incident ray and the refracted ray is equal to: (+1, -0.33)

- a. 0°
- b. 45°
- c. 90°
- d. 30°

86. If "+" means "-", "-" means "+", "*" means "x", and "x" means "+", what will come in place of the question mark in the following equation? (+1, -0.33)

$25 + 35 - 5 * 4 = ?$

- a. 19
- b. 14
- c. 18
- d. 16

87. Select the set in which the numbers are related in the same way as the numbers in the following set. (+1, -0.33)

(4, 25, 6), (3, 28, 9)

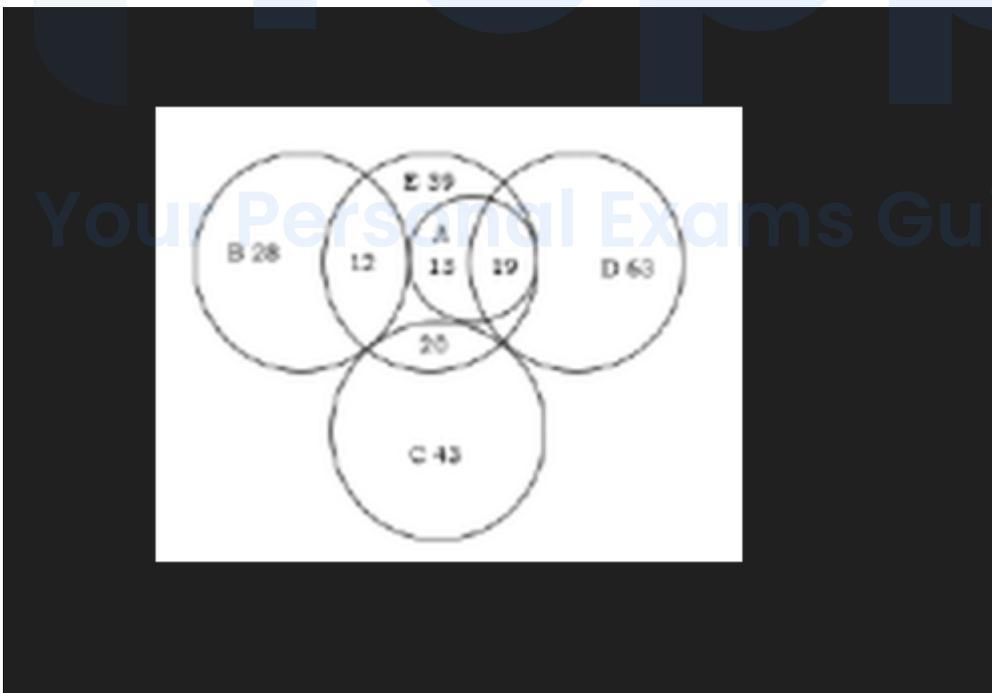
- a. (3, 81, 6)
- b. (12, 96, 8)
- c. (14, 55, 4)
- d. (7, 22, 3)

88. Study the diagram and answer the question that follows: (+1, -0.33)

A = Academicians, E = Teachers, D = Women, B = Men, C = Doctors.

The numbers inside the shapes indicate the number of respective persons. What is the sum total of the following:

- (i) Women academicians who are teachers
- (ii) Teachers who are doctors
- (iii) Men who are neither teachers nor academicians?



- a. 67
- b. 64

- c. 41
 - d. 63
-

89. A cuboid with dimensions $18.5\text{ cm} \times 12.5\text{ cm} \times 10\text{ cm}$ needs to be painted all over. Find the area to be painted. **(+1, -0.33)**

- a. 1157.5 cm^2
 - b. 1198 cm^2
 - c. 984.56 cm^2
 - d. 1082.5 cm^2
-

90. What does the term 'Upa' in the term Upanishad denote? **(+1, -0.33)**

- a. Nearness
 - b. Happiness
 - c. Totality
 - d. Secret
-

91. A contraceptive technique that increases phagocytosis of sperms within the uterus is: **(+1, -0.33)**

- a. Use of copper T
- b. Use of condoms
- c. Surgery

d. Use of oral contraceptives

92. Which day of the calendar year is acknowledged as 'Rare Disease Day'? (+1, -0.33)

a. 18 February

b. 28 February

c. 28 March

d. 08 February

93. Select the option that is related to the fifth number in the same way as the second number is related to the first number, and the fourth number is related to the third number: (+1, -0.33)

3 : 7 :: 9 : 27 :: 15 : ?

a. 18

b. 40

c. 42

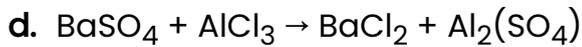
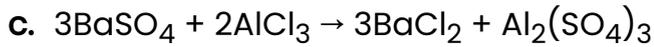
d. 26

94. The balanced reaction for the following chemical reaction is: (+1, -0.33)

Barium sulphate + Aluminium chloride → Barium chloride + Aluminium sulphate

a. $\text{BaSO}_4 + \text{AlCl}_3 \rightarrow \text{BaCl}_2 + \text{Al}_2(\text{SO}_4)_3$

b. $2\text{BaSO}_4 + 2\text{AlCl}_3 \rightarrow 2\text{BaCl}_2 + \text{Al}_2(\text{SO}_4)_3$



95. In Newlands' Octaves, the properties of which two elements were found to be the same? (+1, -0.33)

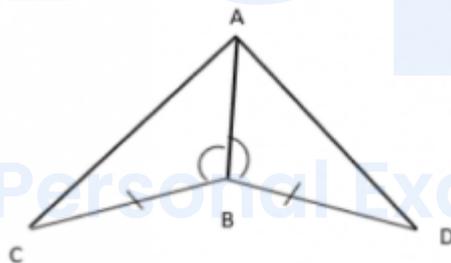
a. Na, Mg

b. H, Th

c. Li, Na

d. Ca, Cl

96. In the given figure, $\angle ABC = \angle ABD$, $BC = BD$. Then, ΔCAB is congruent to: (+1, -0.33)



a. ΔABD

b. ΔADB

c. ΔDAB

d. ΔDBA

97. If $a:b = 2:3$ and $b:c = 3:4$, then $a:b:c = ?$ (+1, -0.33)

- a. 3:2:4
 - b. 2:3:4
 - c. 3:4:2
 - d. 2:4:3
-

98. What is the need to balance chemical equations? (+1, -0.33)

- a. To indicate the ratio of masses of reactants and products in which they react.
 - b. To indicate the ratio of volumes of reactants and products in which they react.
 - c. To satisfy the law of conservation of mass.
 - d. To satisfy the law of constant proportions.
-

99. A can finish painting a sari in 11 days, B in 20 days, and C in 55 days if they work independently. In how many days can the work be completed if A is assisted by B on every odd-numbered day and by C on every even-numbered day till the work completes? (+1, -0.33)

- a. 9 days
 - b. 18 days
 - c. 12 days
 - d. 8 days
-

100. As of July 2022, under the Pradhan Mantri Shram Yogi Maan-Dhan Yojana (PM-SYM) for Old Age Protection, what percentage of monthly contribution is payable by the beneficiary? (+1, -0.33)
- a. 50%
 - b. 40%
 - c. 25%
 - d. 30%

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