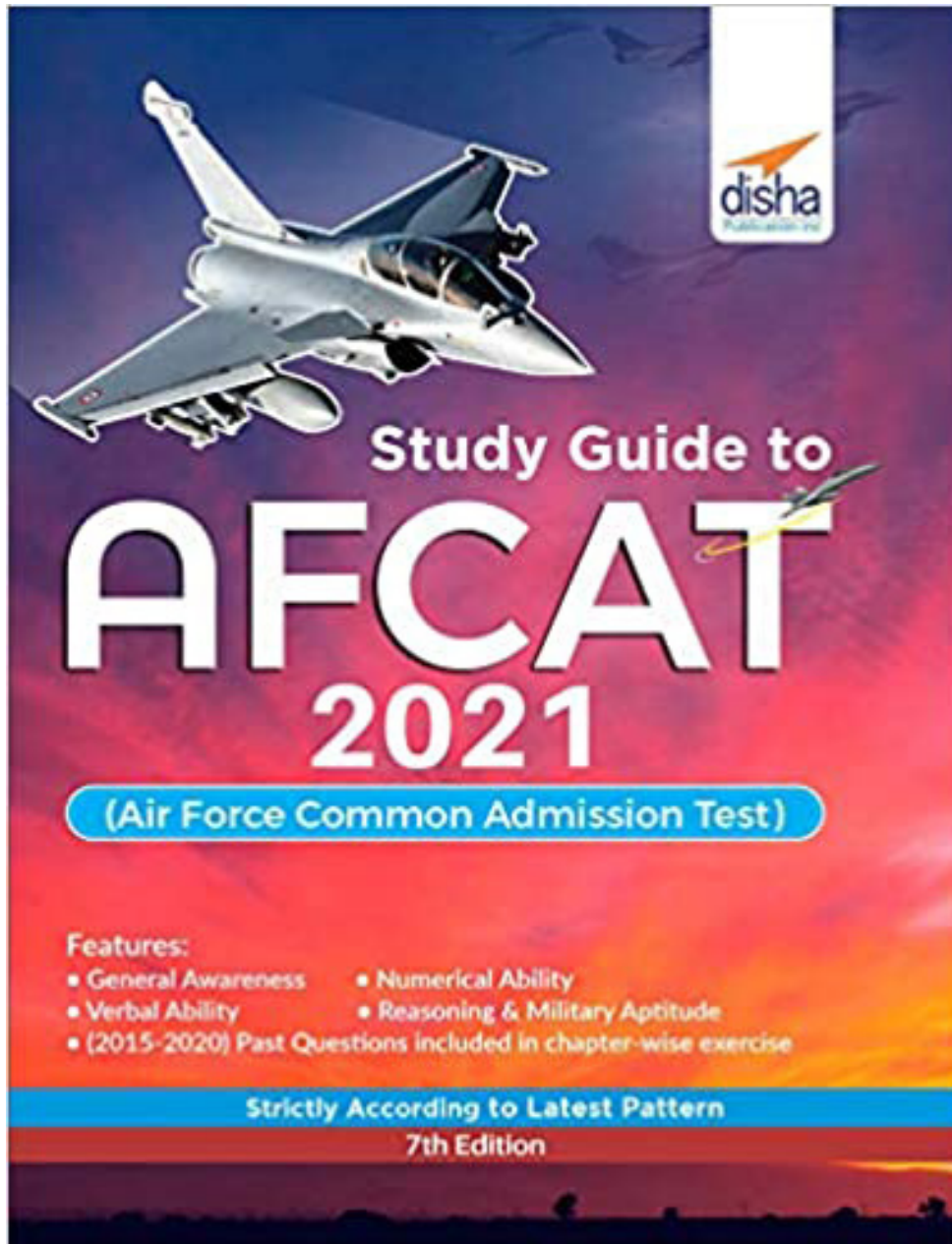


Air Force Common Admission Test (AFCAT) Solved Paper 2020-II

This Paper is taken from our Book "Study Guide for AFCAT 2021"



ISBN : 9788194787082

AIR FORCE COMMON ADMISSION TEST (AFCAT) II/2020

Instructions for candidates

TIME ALLOTTED – 2 HRS.

- Total No. of Questions–100. Each Question is of three marks.
- One mark will be deducted for every wrong answer.
- Do not write or mark on the Question Paper.
- Question Paper to be returned before leaving the Exam Hall.

NUMERICAL ABILITY

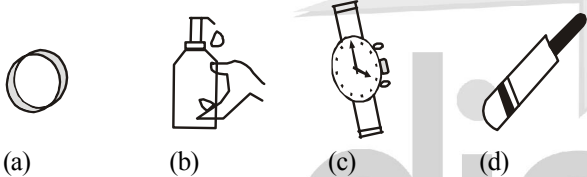
- Calculate the Compound interest on a sum of 64000 compounded quarterly for 1 year at the rate of 20%?
 - 15660
 - 12392
 - 13792
 - None of these
- A car owner buys petrol at Rs. 10, Rs.15, and Rs.20 per liters for three successive years. What approximately is the average cost per liters of petrol if he spends Rs. 8000 each year?
 - 16.50
 - 13.85
 - 10.35
 - None of these
- In a school library 5 percents books are in Hindi; 10 percent of the remaining are in Mathematics and 20 percent of the remaining are in Science. The remaining 17100 books are in English. Then find the total number of books in the school library.
 - 8000
 - 68000
 - 7800
 - None of these
- Find the value of $(45\% \text{ of } 6500 + 25\% \text{ of } 560 - 15 \div 6) \div 35 - 15 \div 2$
 - 80
 - 635
 - 76.5
 - 70
- A seller has a 20% loss after selling an item at ₹ 1200. At what price should sell it to get 5% profit?
 - 1650
 - 1575
 - 1430
 - None of these
- Two guns are fired from the same place at an interval of 16 minutes. A person approaching the place observes that 15 minutes 30 seconds have elapsed between the hearings of the sound of the two guns. If the velocity of the sound is 330 m/sec, the man was approaching that place at what speed (in km/h)?
 - 40.5 kmph
 - 50.5 kmph
 - 60.5 kmph
 - 38.32 kmph
- A man starts painting a fence, 2nd day 2 mans join him, 3rd day 3 more mans joined them and so on, fence is painted in 40 days. How many days will be taken by 80 women to paint the whole fence if efficiency of 1 man is equal to efficiency of 2 women?
 - 270 days
 - 280 days
 - 275 days
 - 287 days
- P, Q, R all of equal efficiency did a work together in 54 days if all work for six days and P left after six days. Then how many days rest work will completed?
 - 72 days
 - 68 days
 - 75 days
 - 120 days
- Two classes A and B have students 65 and 60. Average marks of class A is 55 and class B is 50. Find Average of both the classes?
 - 58
 - 56.2
 - 52.6
 - None of these
- Ratio of volumes of three containers is 3:4:5. All the three containers are full of a mixture of milk and water. Ratio of milk and water is 2:1, 3:1 and 2:3 in the three containers respectively. If the liquid of all the three containers is poured in the 4th container then find the ratio of milk and water.
 - 7:5
 - 5:3
 - 7:3
 - 8:3
- A student goes from his house to college by car at 30km/hr and return at 25 km/hr. If he takes total 5.5 hours in the whole journey. Find the distance between college and his house.
 - 60km
 - 68km
 - 62km
 - 75km
- 60% of total donation required by college was collected when 50% of the parents donated an average of Rs 1250. Find the average amount that should be donated by rest 50% parents so that college has the whole amount that was required.
 - Rs. 766.66
 - Rs. 833.33
 - Rs. 686
 - Rs. 1000
- A room was rented, and the rent of odd day was Rs 1250 and that of even day was Rs 1500. If the room was rented on an even day and the total amount was Rs. 34500. Then, find the total duration for which room was rented?
 - 20 days
 - 30 days
 - 40 days
 - 25 days
- The ratio of male to female in a city is 3:7. The children percentage among male and female is 25% and 30% respectively. If the number of adult males in the city is 28494, find population of city?
 - 162640
 - 126640
 - 182000
 - None of these
- Ratio of speeds of bike, car and bus is 3 : 8 : 6. If bus covers 720 km in 12 hours, find the average speeds of bike and car together.
 - 36 km/hr
 - 60 km/hr
 - 55 km/hr
 - 72 km/hr
- The average of 15 persons increased by 2.5 when a person weighting 44 kg is replaced by a new person, find the weight of the new person?
 - 66 kg
 - 88.5 kg
 - 74 kg
 - 81.5 kg
- Solve the given equation: $7.5\% \text{ of } 1250 - ? = 1.5\% \text{ of } 850$
 - 81
 - 60
 - 74
 - 72
- Max. marks in Physics, Maths and Chemistry is in the ratio 2 : 3 : 1 and X got 80% in Physics. 50% in Maths and 45% in Chemistry. Calculate his final percentage?
 - 49%
 - 59%
 - 62%
 - None of these

REASONING AND MILITARY APTITUDE TEST

DIRECTIONS (Qs. 19-23): In each of the following questions, some groups of letters/words/numbers are given, all of which, except one, share a common similarity while one is different. Choose the odd one out.

19. (a) Breeze (b) Rock
(c) River (d) Earth
20. (a) Mountains (b) Forest
(c) Star (d) Ocean
21. (a) POT (b) CAT
(c) SHE (d) RUN
22. (a) Hydrogen (b) Nitrogen
(c) Argon (d) Water
23. (a) 10648 (b) 17578
(c) 46656 (d) 32768

DIRECTION (Q.24): Choose the picture that would go in the empty box so that the last two pictures are related in the same way as the first two are related.

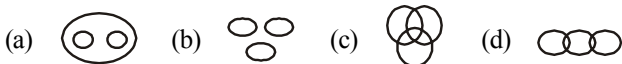


DIRECTIONS (Qs.25-28): In the following questions, select the related word/number/letter from the given alternatives.

25. Car : Road :: Train : ?
(a) Rain (b) Air (c) Signal (d) Track
26. UVWX : YYYY :: GHIJ : ?
(a) MMM (b) KKKK (c) DDDD (d) FFFF
27. 112 : 12544 (6) :: 122 : ?
(a) 14884(5) (b) 18448(5) (c) 14488(5) (d) 14848(5)
28. Virus : Virology
(a) Birds : Ornithology (b) Human : Mammalogy
(c) Fish : Mycology (d) Fungi : Phycology

DIRECTIONS (Qs.29-31): Each of these questions given below contains three elements. These elements may or may not have some inter linkage. Each group of elements may fit into one of these diagrams at (a), (b), (c), and (d). You have to indicate the group of elements which correctly fits into the diagrams.

29. Which of the following diagrams indicates the best relation between Women, Doctor and Entrepreneur?



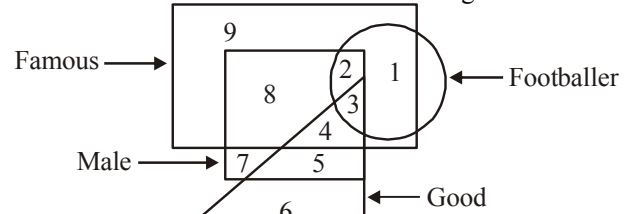
30. Which of the following diagrams indicates the best relation between Women, Mother and Engineer?



31. Which of the following diagrams indicates the best relation between Cricket, Player and Field?



32. In the given figure, which number represents male footballers who are famous but are not good?



- (a) 3 (b) 2 (c) 8 (d) 4

33. Read the given statements and conclusions carefully and select which of the conclusions logically follow(s)

Statements:

All magic are Raw
Some Raw are tall.

Conclusion

- I. Some tall are raw
II. No magic is tall
(a) Only I follows (b) Both I and II follow
(c) Neither I nor II follows (d) Only II follows

34. Find the missing number from the given responses.

102	?	174
34	112	58
17	56	29

- (a) 115 (b) 336 (c) 560 (d) 384

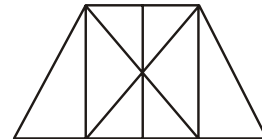
35. In a family of eight persons, there are two couples, each having two children. Bikki and Dev are brothers and each has two children. Esha is the aunt of Arjun, who is the cousin brother of Chaya. Chaya is the sister of Hiten, who is the cousin brother of Gayu. Fiza is the wife of Bikki. How is Hiten related to Fiza ?

- (a) Nephew (b) son-in-law
(c) Son (d) Brother-in-law

36. In the code language, ABSENCE is written as SBADECN. How will ACCOUNT be written as in that language?

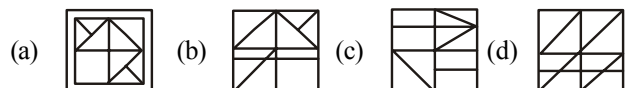
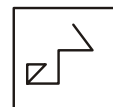
- (a) CCANTNU (b) TNUCCAN
(c) CCANUTN (d) UNTNACC

37. How many triangles are there in the given figure?

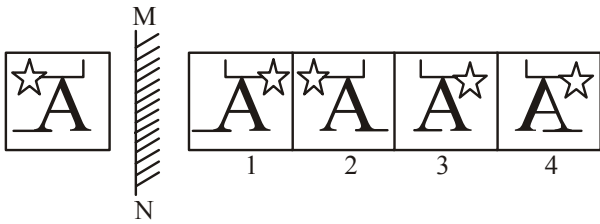


- (a) 16 (b) 18 (c) 20 (d) 24

38. Select the option in which the given figure is embedded.

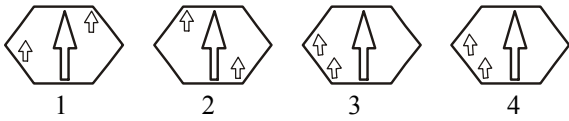


39. Choose the mirror image for the following figure.



- (a) 1 (b) 2 (c) 3 (d) 4

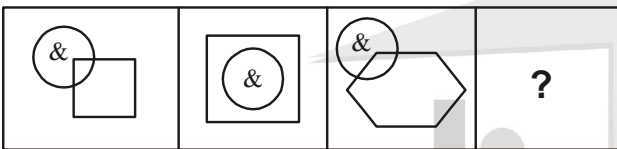
40. Select the pattern from the given options that resembles closest to :



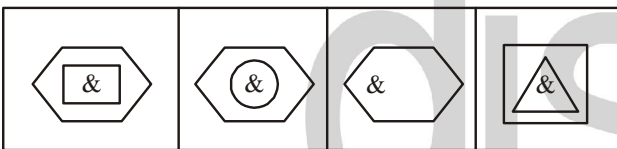
- (a) 1 (b) 2 (c) 3 (d) 4

41. Which answer figure will come next in the given problem figure series?

Problem Figures :

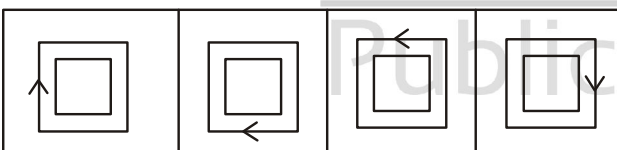


Answer Figures :



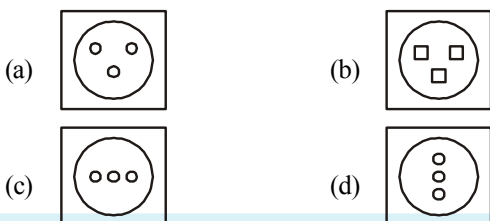
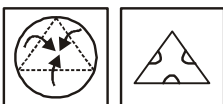
- (a) 1 (b) 2 (c) 3 (d) 4

42. Find the odd one out.

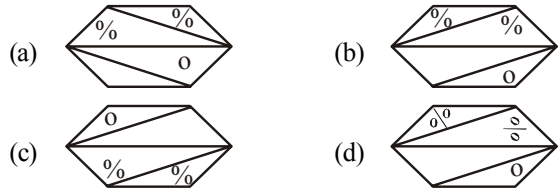
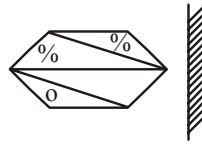


- (a) 1 (b) 2 (c) 3 (d) 4

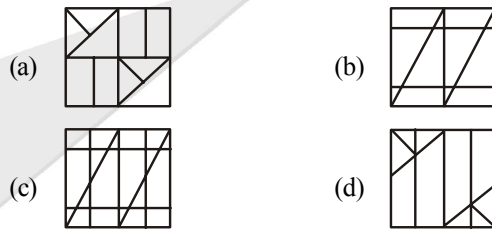
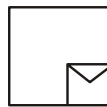
43. A piece of paper is folded and punched as shown below in the question figures. From the given answer figures, indicate how it will appear when opened?



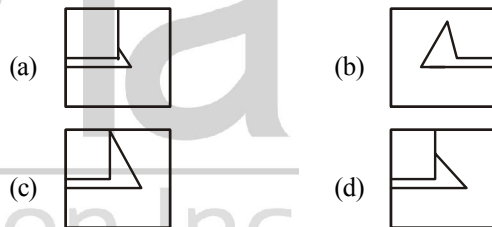
44. Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



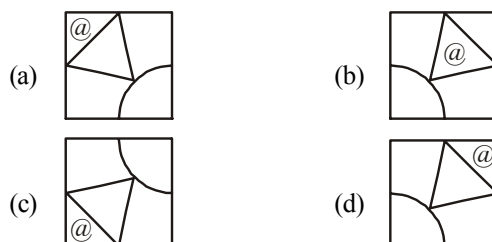
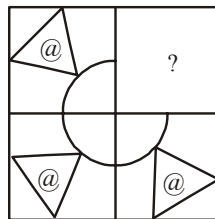
45. From the given answer figures, select the one in which the question figure is hidden/embedded.



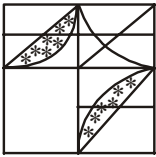
46. Which answer figure will complete the pattern in the question figure?



47. Which answer figure will complete the pattern in the questions?



48. Which answer figure will complete the pattern in the question figure?



- (a) (b) (c) (d)

49. Select the correct combination of mathematical signs to replace * signs and to balance the equation.

$$24 * 2 * 3 * 3 * 21$$

- (a) $-, +, =, \times$ (b) $\div, =, \times, +$
(c) $\div, +, \times, =$ (d) $-, =, \times, +$

50. Which number will replace the question mark (?) in the following series?

M2X, P4V, S6T, ... ?...

- (a) U10S (b) V8R (c) T8S (d) R8D

ENGLISH LANGUAGE

51. Select the synonym of "Affluent".

- (a) miser (b) pungent
(c) sarcastic (d) wealthy

52. Select the synonym of "Pilfer".

- (a) steal (b) return
(c) deceive (d) sell

53. Select the synonym of "Vanquish".

- (a) ridicule (b) respect
(c) beat (d) support

54. Select the antonym of "Luscious".

- (a) smelly (b) funky
(c) melodramatic (d) distasteful

55. Select the antonym of "Mitigate".

- (a) alleviate (b) dull
(c) lower (d) aggravate

56. Select the antonym of "Mollify".

- (a) relieve (b) provoke
(c) soften (d) mock

DIRECTIONS (Qs.57-59): In these questions, four alternatives are given for the idiom/phrase given in bold. Choose the alternative which best expresses the meaning of the idiom/phrase given in bold.

57. Take Bull by its horn

- (a) deal decisively with a difficult situation
(b) insult someone in public
(c) remind someone of his promise
(d) display one's wealth

58. Take Cat out of the bag

- (a) to rebuke
(b) to defame someone
(c) to reveal a secret
(d) to sell a pet

59. Fly off the Handle

- (a) reprimand someone severely
(b) lose one's temper suddenly
(c) deliver a sermon
(d) break down of bike

DIRECTIONS (Qs.60-63): In the following questions, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option.

60. No sooner did he arrive _____ the hotel than it started raining.

- (a) at (b) in (c) on (d) upon

61. She always dreamed _____ being famous.

- (a) at (b) of (c) to (d) upon

62. He is very good. The youngsters should _____ him.

- (a) compete (b) counter (c) follow (d) emulate

63. He congratulates him _____ his success.

- (a) for (b) upon (c) on (d) with

DIRECTIONS (Qs.64-67): In each of the question part, find out which part has an error. If there is no mistake, the answer is 'No error'.

64.

- (a) It is necessary that
(b) You perform well but
(c) We might have to fail you.
(d) No error

65.

- (a) There is no questions (b) of me failing
(c) in the examination (d) No error

66.

- (a) Pallavi is so obstinate (b) that no one can
(c) altar her views (d) No error

67.

- (a) I saw him (b) climbing on the tree
(c) to pluck apples. (d) No error

DIRECTIONS (Qs.68-70): Read the following passage carefully and choose the best answer to each question out of the five given alternatives.

Almost everybody allows himself or herself or herself some entirely unjustifiable generalizations on the subject of women. Married men, when they generalize on that subject, judge by their wives; women judge by themselves. It would be amusing to write a history of the views of men on women.

In antiquity, when male supremacy was unquestioned and Christian ethics were still unknown, women were harmless, rather silly, and a man who took them seriously was somewhat despised.

Plato's great objection to the drama was that the playwright had to imitate women in creating his female roles. With the coming of Christianity, the woman took on a new part, that of the temptress; but at the same time, she was also found capable of being a saint.

68. Some unjustifiable generalizations are made on

- (a) infants (b) adolescents
(c) teenagers (d) women

69. In antiquity, male supremacy was

- (a) doubtful (b) dubious
(c) unquestioned (d) questionable

70. With the coming of Christianity, women took on a new part of

- (a) temptress alone (b) saint alone
(c) protector (d) temptress and saint

DIRECTIONS (Qs. 71-75): In the following passage there are blanks, each of which has been numbered. These numbers are printed below the passage and against each, five words/phrases are suggested, one of which best fits the blank appropriately. Find out the appropriate word/phrase in each case.

As the temperature (71) during the summer season, many households turn to air conditioners to keep them cool. Air conditioners, which were once regarded as a residential luxury, have now become a (72). Enjoying a cooler atmosphere during hot weather is not the only benefit of using the air conditioner. A household, a vehicle, or a building becomes cleaner and safer for breathing as air conditioning also (73) the growth and spread of harmful micro-organisms. However, along with the benefits, some disadvantages are also (74) with it. One of the most controversial topics attached to the subject of air conditioning deals with some of the materials that are used to produce the cooling effect - fluorocarbons. These refrigerants (75) to global warming and are regarded as one of the main ways in which air-conditioning impacts the environment.

71. (a) Decreases (b) Rises
(c) Deviates (d) Fluctuates
72. (a) Irreplaceable (b) Obligatory
(c) Certainty (d) Necessity
73. (a) Prevents (b) Escapes
(c) Kills (d) Removes
74. (a) Resulted (b) Caused
(c) Associated (d) Influenced
75. (a) Result (b) Determine
(c) Affect (d) Contribute

GENERAL AWARENESS

76. Subroto Cup is Associated with which of the following game?
(a) Cricket (b) Football
(c) Lawn Tennis (d) Hockey
77. Duck Is Related to.....
(a) Kabaddi (b) Swimming
(c) Ice hockey (d) Cricket
78. Who was the first Governor General of Free India?
(a) Lord Mountbatten (b) C. Rajagopalachari
(c) Lord William Bentinck (d) Warren Hastings
79. Which alloy is used in Electrical Appliances?
(a) Chromium (b) Beryllium
(c) Gallium (d) Nichrome
80. India's Largest Delta is.....
(a) Brahmaputra Delta (b) Ganga Delta
(c) Krishna River Delta (d) Godavari River Delta
81. Gulf of Mannar is located in.....
(a) Arabian Sea (b) Pacific Ocean
(c) Indian Ocean (d) Atlantic Ocean
82. Who established Harijan Seva Sangh?
(a) Dr, Bhim Rao Ambedkar
(b) Mahatma Gandhi
(c) Jagjivan Ram
(d) Kanshiram
83. Where is ISRO Space application center located?
(a) Ahmedabad Gujarat
(b) Katak , Odisha
(c) Sriharikota, Andhra Pradesh
(d) None of these
84. Who is the author of the book "Straight Drive"?
(a) Sachin Tendulkar (b) Sunil Gavaskar
(c) Kapil Dev (d) M.S. Dhoni
85. Who wrote the book "Parineeta"?
(a) Sarat Chandra chattopadhyay
(b) Shashi tharoor
(c) Anad Bose
(d) Pranav Mukharjee
86. Who is known as the bird man of India?
(a) Rakesh Shukla (b) Dr Salim Ali
(c) Anil Grower (d) None of these
87. India borrowed the Directive Principles of State Policy (DPSP) from which Constitution?
(a) Irish Constitution (b) British Constitution
(c) Canadian Constitution (d) USA's constitution
88. Who translated Upanishada into Persian Language?
(a) Dara Shikhoh (b) John shore
(c) Willkins (d) None of the above
89. "Queens Berry Rules" are associated with which game?
(a) Wrestling (b) Weightlifting
(c) Table Tennis (d) Boxing
90. Which planet is known as "Watery Planet"?
(a) Earth (b) Mars
(c) Pluto (d) Venus
91. Who is known as "Napoleon of India"?
(a) Samundra Gupta (b) Ashoka the great
(c) Balban (d) Akbar
92. Who is the first batsman to hit six sixes in an over in a T20 International Cricket?
(a) M.s. Dhoni (b) Sachin Tendulkar
(c) Yuvaraj Singh (d) Virat Kohli
93. Which Indian leader was popularly known as "Punjab Kesari"?
(a) Lala Lajpat Roy (b) Bhagat Singh
(c) Navjot Singh Sidhu (d) None of these
94. Who is known as the father of German Unity?
(a) Gerhard Schröder (b) Angela Merkel
(c) Erich Honecker (d) Helmut Kohl
95. Vienna is the National Capital of which country?
(a) Australia (b) Germany
(c) France (d) Canada
96. United Nations Organization was created in which city?
(a) Chicago (b) Las Vegas
(c) Seattle (d) New York
97. The term "bully" is associated with which sport?
(a) Hockey (b) Volleyball
(c) Badminton (d) Kabaddi
98. Who authored the book "Das Capital"?
(a) KarlMarx (b) Lenin
(c) Mao (d) None of these
99. Which of the following Fort was NOT built by Akbar?
(a) Agra Fort (b) Lahore Fort
(c) Allahabad Fort (d) Gwalior Fort
100. Sphygmomanometer is used to know
(a) Heart beat
(b) Blood Pressure
(c) Oxygen level in human body
(d) Glucose level in human body

ANSWER KEY

1	(c)	13	(d)	25	(d)	37	(c)	49	(c)	61	(b)	73	(a)	85	(a)	97	(a)
2	(b)	14	(b)	26	(b)	38	(b)	50	(b)	62	(d)	74	(c)	86	(b)	98	(a)
3	(d)	15	(c)	27	(a)	39	(d)	51	(d)	63	(c)	75	(d)	87	(a)	99	(d)
4	(a)	16	(d)	28	(c)	40	(d)	52	(a)	64	(b)	76	(b)	88	(a)	100	(b)
5	(b)	17	(a)	29	(c)	41	(b)	53	(c)	65	(a)	77	(d)	89	(d)		
6	(d)	18	(b)	30	(d)	42	(c)	54	(d)	66	(c)	78	(a)	90	(a)		
7	(d)	19	(a)	31	(b)	43	(a)	55	(d)	67	(b)	79	(d)	91	(a)		
8	(a)	20	(c)	32	(b)	44	(d)	56	(b)	68	(d)	80	(b)	92	(c)		
9	(c)	21	(c)	33	(a)	45	(a)	57	(a)	69	(c)	81	(c)	93	(a)		
10	(a)	22	(d)	34	(b)	46	(c)	58	(c)	70	(d)	82	(b)	94	(d)		
11	(d)	23	(b)	35	(a)	47	(d)	59	(b)	71	(b)	83	(a)	95	(a)		
12	(b)	24	(b)	36	(a)	48	(b)	60	(a)	72	(d)	84	(b)	96	(d)		

ANSWERS & SOLUTIONS

1. (c) Sum = ₹64000
As interest is compounded quarterly
So, Rate $\frac{20}{4}$ 5%
and, Time = 1 year = 4 quarterly.

$$\text{Compound interest Sum} \left[\left(1 + \frac{r}{100} \right)^{\text{time}} - 1 \right]$$

$$64000 \left[\left(1 + \frac{5}{100} \right)^4 - 1 \right] = 64000 [1.2155 - 1]$$

$$= 64000 [0.2155] = ₹ 13792$$

2. (b) Amount of petrol buy in ₹ 8000 at the rate ₹ 10

$$\frac{8000}{10} \quad 800 \text{ liters.}$$

Amount of petrol buy in ₹ 8000 at the rate ₹ 15

$$\frac{8000}{15} \quad 533.33 \text{ liters}$$

Amount of petrol buy in ₹ 8000 at the rate ₹ 20

$$\frac{8000}{20} \quad 400 \text{ liters}$$

Total petrol bought in 3 years

$$= 800 + 533.33 + 400 = 1733.33 \text{ liters}$$

$$\text{Amount spend} = 8000 + 8000 + 8000 = 24000$$

$$\text{Average price} = \frac{24000}{1733.33} \quad 13.85 \text{ liters.}$$

3. (d) Let total number of books = n

$$\text{then, Number of Hindi books} = n \times \frac{5}{100} \quad 0.05 n$$

Number of Mathematics books

$$= 0.95 n \times \frac{10}{100} \quad 0.095 n$$

Number of Science books

$$= 0.95n - 0.095n \times \frac{20}{100} = 0.171 n$$

Remaining books $(0.855 - 0.171)n = 0.684 n$

$$\text{ATQ, } 0.684 n = 17100$$

$$n = \frac{17100}{0.684} \quad 25000$$

4. (a) $(45\% \text{ of } 6500 + 25\% \text{ of } 560 - 15 \div 6) \div 35 - (15 \div 2)$

$$\left(\frac{45}{100} \times 6500 + \frac{25}{100} \times 560 - \frac{15}{6} \right) \times \frac{1}{35} - \left(\frac{15}{2} \right)$$

$$2925 + 140 - 2.5 \times \frac{1}{35} - 7.5 ; 3062.5 \times \frac{1}{35} - 7.5$$

$$87.5 - 7.5 = 80$$

5. (b) Cost price of the item = $1200 \times \frac{100}{100 - 20}$

$$= 1200 \times \frac{100}{80} \quad 1500$$

$$\therefore \text{Required selling price} = 1500 \times \left(\frac{100 + 5}{100} \right)$$

$$= 1500 \times \frac{105}{100} \quad ₹ 1575$$

6. (d) Difference in time interval

$$= 16 - 15 \text{ min. } 30 \text{ sec} = 30 \text{ sec.}$$

Now, Distance Covered by the sound in 30 sec.

$$= \text{Distance covered by the person in 15 min. } 30 \text{ sec.}$$

$$= 15.5 \text{ min.} = 15.5 \times 60 \text{ sec}$$

$$\text{Now, } 330 \times 30 = (u) \times 15.5 \times 60$$

Where u is the speed of the person

$$\therefore u = \frac{330 \times 30}{15.5 \times 60} \quad 10.6 \text{ m/sec.}$$

$$\text{Speed of person (km/hr)} = 10.6 \times \frac{18}{5} \quad 38.32 \text{ km/hr.}$$

7. (d) Here, On the first day, work is done by 1 man.
On the second day, work is done by (1 + 2) men.
On the third day, work is done by (1 + 2 + 3) men.
Similarly,
On the 40th day work is done by (1 + 2 + 3 + 40) men.
Sum of the above series
= [1 + (1 + 2) + (1 + 2 + 3) + + (1 + 2 + 3 + 40)]
= $\frac{1}{6} \times 40 \times 41 \times 42 = 11480$

Again, efficiency of 1 men = efficiency of 2 women

∴ One women will finish the work in

$$11480 \times 2 = 22960 \text{ days.}$$

Thus, 80 women will finish the job in

$$= \frac{22960}{80} = 287 \text{ days.}$$

8. (a) Work efficiency of P = Work efficiency of Q = Work efficiency of R.

Together they finish whole work in 54 days.

Amount of work finished by them in 6 days

$$= \frac{6}{54} \times \frac{1}{9} \text{ work}$$

$$\text{Rest work} = 1 - \frac{1}{9} \times \frac{8}{9} \text{ work.}$$

Time required to finish $\frac{8}{9}$ work by Q and R

$$= \frac{8}{9} \times \frac{54 \times 3}{2} = 72 \text{ days.}$$

9. (c) Total marks of Class A Students = $65 \times 55 = 3575$.
Total marks of Class B Students = $60 \times 50 = 3000$.
Average marks of two classes together

$$\frac{3575}{65} + \frac{3000}{60} = \frac{6575}{125} = 52.6$$

10. (a) Let volumes of three containers are 3, 4 and 5 liters.

Container volumes	Milk	Water
3 liters	$\frac{2}{3} \times 3 = 2$	$\frac{1}{3} \times 3 = 1$
4 liters	$\frac{3}{4} \times 4 = 3$	$\frac{1}{4} \times 4 = 1$
5 liters	$\frac{2}{5} \times 5 = 2$	$\frac{3}{5} \times 5 = 3$
total	7	5

In 4th Container, Milk : Water = 7 : 5.

11. (d) Let the distance between college and house is d Km.
ATQ,

$$\frac{d}{30} - \frac{d}{25} = 5.5$$

$$\frac{5d}{150} - \frac{6d}{150} = 5.5$$

$$11d = 5.5 \times 150$$

$$d = \frac{5.5 \times 150}{11} = 75 \text{ Km.}$$

12. (b) Let whole amount of donation is ₹ 100,000 and total number of parents = x.
then, ATQ,

$$\frac{60}{100} \times 100000 = 1250 \times \frac{50}{100} \times x.$$

$$x = \frac{60000}{1250 \times 0.5} = 96.$$

Now, Average amount that should be required to be donated by remaining 50% parents is Z.

then,

$$\frac{40}{100} \times 100000 = Z \times \frac{50}{100} \times 96.$$

$$\therefore Z = \frac{40000}{48} = 833.33$$

13. (d) Let the Room was rented for n odd days and (n + 1) even days.

Then, total amount Collection

$$(n + 1) * 1500 + n * 1250 = 34500$$

$$2750n = 33000.$$

$$n = \frac{33000}{2750} = 12$$

Hence, total number of days room was rented

$$= 12 \times 2 + 1 = 25 \text{ days.}$$

14. (b) Number of male : Female = 3 : 7

Number of Adult males in the city = 28494

$$3x \times \left(\frac{100 - 25}{100} \right) = 28494$$

$$3x \times \frac{75}{100} = 28494$$

$$x = \frac{28494 \times 100}{3 \times 75} = 12664.$$

Total population of the city = $3x + 7x = 10 \times 12664 = 126640$.

15. (c) Bus Speed = $\frac{720}{12} = 60 \text{ Km/hr.}$

Speed of Bike : Car : Bus = 3 : 8 : 6

$$\text{Speed of Bike} = \frac{3}{6} \times 60 = 30 \text{ Km/hr.}$$

and, Speed of Car = $\frac{8}{6} \times 60 = 80 \text{ Km/hr.}$

Average Speed of Bike and Car together

$$= \frac{30 + 80}{2} = 55 \text{ Km/hr.}$$

16. (d) Let weight of new person is W Kg.
ATQ,

$$W - 44 = 15 \times 2.5.$$

$$W = 44 + 37.5 = 81.5 \text{ Kg.}$$

17. (a) $\frac{7.5}{100} \times 1250 - ? = \frac{1.5}{100} \times 850$

$$93.75 - ? = 12.75$$

$$\therefore ? = 93.75 - 12.75 = 81.$$

18. (b) Let maximum marks in Physics, Maths and Chemistry are 200, 300 and 100 respectively.

$$\text{Marks obtained by X in physics} = 200 \times \frac{80}{100} = 160$$

$$\text{Marks obtained by X in Maths} = 300 \times \frac{50}{100} = 150$$

$$\text{Marks obtained by X in Chemistry} = 100 \times \frac{45}{100} = 45$$

$$\text{Total Marks obtained by} = 160 + 150 + 45 = 355.$$

$$\text{Full marks} = 200 + 300 + 100 = 600.$$

$$\text{Precent Marks} = \frac{355}{600} \times 100 \approx 59.17\% \approx 59\%$$

Sol. (19-23):

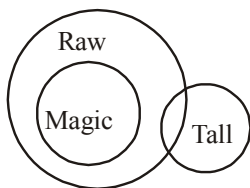
19. (a) Except breeze all are made by nature while, breeze is man-made. So, option (a) is the odd one out.
 20. (c) Star is seen in the sky while all others are seen on earth itself. So, option (c) is the odd one out.
 21. (c) Except 'SHE' in all other words, the middle letter is a vowel. So, option (c) is the odd one out.
 22. (d) Except 'Water' all are gas, while water is a liquid. So, option (d) is the odd one out.
 23. (b) Except '17578' all are cube of a particular number. So, option (b) is the odd one out.
 24. (b) As Mask is to nose, in the same way hand sanitizer is to hand. So, option (b) is correct.

Sol. (25-28):

25. (d) Car runs on road while Train runs on Track.
 26. (b) As, UVWX _____ YYYYY (+4, +3, +2, +1 in forward direction)
 Similarly, GHIJ _____ KKKK (+4, +3, +2, +1 in forward direction)
 27. (a) As, $(112)^2 = 12544$
 $(1+2+5+4+4=16)$ take only unit digit i.e. 6 so, our final answer is 12544(6)
 Similarly, $(122)^2 = 14884$
 $(1+4+8+8+4=25)$ take only unit digit i.e. 5 so, our final answer is 14884(5)
 28. (c) Study of virus is called virology in the same way study of birds is called ornithology.

Sol. (29-31):

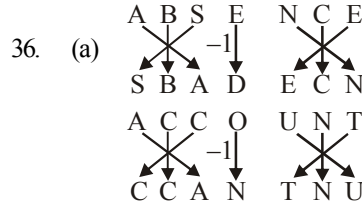
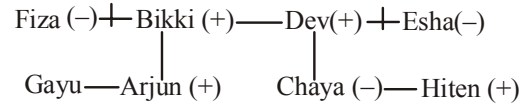
29. (c) Some women may be doctor and Entrepreneur, similarly some doctor may be women as well as entrepreneur.
 30. (d) All mothers are women and Engineer may be in some way.
 31. (b) Cricket, Players and Field all are different.
 32. (b) '2' represents male footballers who are famous but are not good.
 33. (a) Some tall are raw is true.



Hence, Only I follow

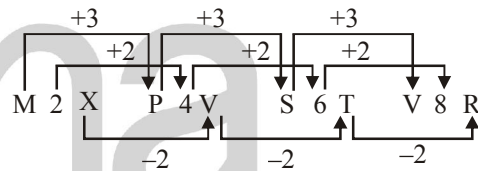
34. (b) $56 \times 2 = 112, 112 \times 3 = 336$

35. (a) Hiten is nephew of Fiza.



37. (c) There are 20 triangles.
 38. (b) In option (b) given figure is embedded
 39. (d) 40. (d) 41. (b)
 42. (c) Except figure '3'. All other have arrow in clockwise direction.
 43. (a)
 44. (d)
 45. (a)
 46. (c)
 47. (d)
 48. (b)
 49. (c) $24 * 2 * 3 * 3 * 21$
 $24 \div 2 + 3 \times 3 = 21$
 $12 + 9 = 21$
 $21 = 21$
 Hence, c is the correct choice

50. (b) V8R will replace the question mark



51. (d) The synonym of Affluent is wealthy which means having an abundant supply of money or possessions of value; miser means a stingy hoarder of money and possessions (often living miserably); pungent means strong and sharp; sarcastic means expressing or expressive of ridicule using sarcasm.
 52. (a) Pilfer means make off with belongings of others; steal also means the same; other options do not match with the word 'pilfer'.
 53. (c) Vanquish means come out better in a competition, race, or conflict whose synonym can be beat. Ridicule means language or behaviour intended to mock or humiliate. Other options are not relevant.
 54. (d) Luscious means extremely pleasing to the sense of taste and its antonym may be distasteful. Other options do not fit into the context.
 55. (d) Mitigate means lessen or to try to lessen the seriousness or extent of while its opposite is aggravate which means make worse. Other options are inappropriate.
 56. (b) Mollify means cause to be more favourably inclined; gain the good will of; its antonym may be provoke which means annoy continually or chronically; other options are irrelevant.

57. (a) The phrase 'take the bull by the horns' means deal decisively with a difficult or dangerous situation.
58. (c) The phrase take cat out of the bag means to reveal a secret. Other options are irrelevant.
59. (b) The phrase fly off the handle means lose one's temper suddenly and unexpectedly.
60. (a) The preposition 'at' is used when referring to buildings as locations in a city. On the other hand, 'in' is used with buildings to mean that something occurs inside the building. 'At' is used to express that something happens at the location.
61. (b) The preposition 'of' will well fit the blank. Other options are out of context.
62. (d) The verb 'emulate' means strive to equal or match, especially by imitating. Other options are not pertinent.
63. (c) In this particular context, it is 'he congratulated him on his success.' This is a fixed, formal expression.
64. (b) The correct sentence is - "It is necessary that you perform well or we might have to fail you."
65. (a) The correct sentence- "There is no question of me failing in the examination."
66. (c) Replace 'altar' with 'alter'. Altar means place of worship whereas Alter means change.
67. (b) Use 'up' in place of 'on'
68. (d) Some unjustifiable generalizations are made on 'women'.
69. (c) In antiquity, male supremacy was unquestioned.
70. (d) Tempress and saint
71. (b) Rises
72. (d) Necessity
73. (a) Prevents
74. (c) Associated
75. (d) Contribute
76. (b) Subroto Cup is associated with Football. It is a prestigious international inter-school football tournament that is held annually in New Delhi, India. It was named after the Indian Air Force Air Marshal Subroto Mukerjee and began in 1960.
77. (d) Duck is associated with Cricket. The term "duck" originates from the "duck's egg". When the batter gets out for zero, his score is commonly referred to as a duck in the game of cricket.
78. (d) The first governor-general in India was Warren Hastings, the first official governor-general of British India was Lord William Bentinck, and the first governor-general of the Dominion of India was Lord Mountbatten.
79. (d) An alloy used in making heating elements for electric heating devices is nichrome. It is an alloy of nickel, chromium, (and sometimes iron and other elements or substances). It is used as resistance wire.
80. (b) The Ganges Delta is a river delta in the Bengal region of the Indian subcontinent, consisting of Bangladesh and the Indian state of West Bengal. It is the world's largest river delta and it empties into the Bay of Bengal.
81. (c) The Gulf of Mannar is a large shallow bay forming part of the Laccadive Sea in the Indian Ocean with least depth of 5.8 m (19 ft). It lies between the west coast of Sri Lanka and the southeastern tip of India, in the Coromandel Coast region.
82. (b) Harijan Sevak Sangh is a non-profit organisation founded by Mahatma Gandhi in 1932 to eradicate untouchability in India.
83. (a) The Space Applications Centre (SAC) is located at Ahmedabad. It is an institution of research under the aegis of the Indian Space Research Organisation (ISRO)..
84. (b) The book Straight Drive was written by Great Sunil Gavaskar. The Maestro has shown his writing skills through his best analytical ability & his accurate critics.
85. (a) Parineeta is a 1914 Bengali language novel written by Sarat Chandra Chattopadhyay and is set in Calcutta, India during the early part of the 20th century.
86. (b) Sálim Moizuddin Abdul Ali was an Indian ornithologist and naturalist. He was the first Indian to conduct systematic bird surveys across India and wrote several bird books that popularized ornithology in India. Sometimes he is referred to as the "Birdman of India".
87. (a) India borrowed Directive Principles of State Policy (DPSP) from the Irish Constitution. Directive Principles of State Policy is non-Justiciable Rights, which means that they cannot be enforced through a Court of Law
88. (a) Dara Shikoh translated Upnishada in Persian language which is called Sirr-e-Akbar. His other famous work includes Majma-ul-Bahrain which was devoted to a revelation of the mystical affinities between Sufic and Vedantic speculation. Dara Shikoh was the eldest son fifth Mughal emperor Shah Jahan and the brother of Aurangzeb.
89. (d) The Marquess of Queensberry Rules, also known as Queensbury Rules, is a code of generally accepted rules in the sport of boxing. The rules were written by John Graham Chambers, a member of the British Amateur Athletic Club. The rules were first published in 1867.
90. (a) The Earth is known as the Blue Planet or the Water Planet. It is called so because when the astronauts first saw the Earth from space, it appeared blue in colour because of the presence of water on it.
91. (a) Samudragupta of the Gupta Dynasty is known as the Napoleon of India. Historian A V Smith called him so because of his great military conquests known from the 'Prayag Prashati' written by his courtier and poet Harisena, who also describes him as the hero of a hundred battles.
92. (c) Yuvraj Singh became the first batsman to hit six sixes in an over in the shortest format when he took on Stuart Broad in the 2007 ICC Men's T20 World Cup.
93. (a) Popularly known as punjab kesari, Lala Lajpat Rai was one third of the triumvirati 'Lal Bal pal'. A freedom fighter who played an important role in independence movement.
94. (d) Helmut Kohl is known as the architect of Germany's 1990 reunification.
95. (a) Vienna is the capital and largest city of Austria, and one of the nine states of Austria. Vienna is Austria's primary city, and its cultural, economic, and political centre.

96. (d) The United Nations is an international organization founded in 1945. It is currently made up of 193 Member States. United Nations Headquarters is located in New York City.
97. (a) The terms Bully, Short corner, Hattrick, Goal, Penalty Corner, Penalty stroke, Pushin, Cut, Scoop, Dribble, Centre forward, Half back, Astroturf, Sudden death, Left in, Left out, Off-side, Tie breaker, Carried, Stick, Striking circle, Under cutting, etc are used in Hockey.
98. (a) KarlMarx has authored several political documents such as The Communist Manifesto, Das Kapital, etc. Karl Heinrich Marx was a German philosopher, socialist revolutionary, historian, journalist, economist, political theorist and sociologist. Karl Marx was dragged out of his country due to his political publications and lived in exile for decades in London with his wife and children.
99. (d) Gwalior Fort was assembled in 8th century by Suraj Sen. Gwalior Fort includes many structures like palaces, temples, and water tanks.
100. (b) A sphygmomanometer, also known as a blood pressure monitor, or blood pressure gauge, is a device used to measure blood pressure, composed of an inflatable cuff to collapse and then release the artery under the cuff in a controlled manner, and a mercury or aneroid manometer to measure the pressure.