

MAHARAJA RANJIT SINGH AFPI – 2017

*** ENGLISH ***

Direction (Question.1 to 7) : In these questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

Q.1 Enigma

- (1) Reply (2) Praise
(3) Puzzle (4) Sharp

Q.2 Hoary

- (1) Conflict (2) Inculcate
(3) Having grey hair (4) Judged

Q.3 Quaint

- (1) Peculiar (2) Ordinary
(3) Curious (4) Fast

Q.4 Nimble

- (1) Lazy (2) Active
(3) Smart (4) Strong

Q.5 Bridle

- (1) Definite (2) Evasive
(3) Gaudy (4) Restrain

Q.6 Vanity

- (1) Conceit (2) Pride
(3) Humility (4) Liberate

Q.7 Jocund

- (1) Cheerful (2) Flimsy
(3) Cruel (4) Agreement

Direction (Question.8 to 12) : In these questions, a part of sentence is underlined. Below are given alternatives to the underlined part. Choose the correct alternative.

Q.8 The innocence and playfulness of a child exists in all human beings.

- (1) a child exist in
(2) child does exist in
(3) the child existence in
(4) no correction needed

Q.9 He found that thing he had left it.

- (1) where there he had left
(2) there he had left
(3) where he had left
(4) no correction needed

Q.10 Write the letter in a legible hand and you should drop it in the mail box.

- (1) drop (2) you must drop
(3) you drop (4) no correction required

Q.11 What does it matter most is what you talk to others rather than how you do so.

- (1) What matters (2) How does it matter
(3) What matters it (4) no correction needed

Q.12 Sushma was hurried to the station when she dashed against the truck.

- (1) was hurrying (2) is hurried
(3) had hurried (4) No connection needed

Direction (Question. 13 to 16) : In these questions, out of the four alternatives, choose the one which can be substituted for the given words/ sentences.

Q.13 Ridiculous use of words.

- (1) Onomatopoeia (2) Malapropism
(3) Neologism (4) Pun

Q.14 A person not sure of the existence of God.

- (1) Theist (2) Atheist
(3) Agnostic (4) Cynic

Q.15 A person who enters without any invitation.

- (1) Burglar (2) Thief
(3) Intruder (4) Vandal

Q.16 A person who believes that pleasure is the chief good.

- (1) Stoic (2) Hedonist
(3) Epicure (4) Sensual

Q.17 Find the correctly spelt word out of the four words given.

- (1) Inteligencia (2) Intelligentsia
(3) Intelligensia (4) Intelligenstia

Q.18 Find the correctly spelt word out of the four words given.

- (1) Surveilance (2) Surveillence
(3) Survaillance (4) Survellance

Direction (Question 19 - 23) : Four alternatives are given for the idiom/phrases in italics in sentence. Choose the one which best expresses the meaning of the Idiom/phrase.

Q.19 He is the person *after my own heart*.

- (1) an object of mockery
(2) an Emotional man
(3) a happy-go-lucky fellow
(4) exactly the one's own liking

Q.20 She was in a *brown study* and did not notice my entrance.

- (1) reverie (2) sleep
(3) fear (4) dream

Q.21 A fair crack of the whip.
(1) severe punishment
(2) a good check
(3) to provide a fair opportunity
(4) failure of administration

Q.22 She exhibited remarkable *sangfroid* during the crisis.
(1) temper (2) irritation
(3) equanimity (4) anger

Q.23 All his schemes *bite the dust* for the practicality.
(1) are humiliated
(2) are stolen
(3) are looked down upon
(4) are killed

Direction (Question. 24 to 27) : Sentences are given with blanks to be filled in with an appropriate word(s). Choose the correct alternative out of the four.

Q.24 I offered her a job but she _____ to accept it.
(1) refused (2) denied
(3) accepted (4) agreed

Q.25 There is no _____ on the bench.
(1) place (2) space
(3) room (4) none of these

Q.26 You are forbidden _____ here.
(1) not to smoke (2) to smoke
(3) to smoking (4) smoking

Q.27 She denied _____ him.
(1) to see (2) to have seen
(3) having seen (4) to having seen

Direction (Question. 28 to 29) : Some of the sentences have errors and some have none. Find out which part (1), (2) or (3) of a sentence has an error. If there is no error, mark your answer as (4).

Q.28 All his family members (1)/ are (2)/ social and cooperative (3)/ No error (4).

Q.29 All the members of the club are (1)/ kindly requested (2)/ to attend the meeting (3)/ No error (4).

Direction (Question. 30 to 32) : Reorder P, Q, R, S to make a meaningful sentence:

Q.30 My car
P: last night
Q: so i went there
R: on foot
S: broke down
(1) PQRS (2) SPQR
(3) QRPS (4) PSRQ

Q.31 The house
P: after the colonel and his wife

Q: stood empty
R: expired
S: for many years
(1) QPSR (2) PSQR
(3) QSPR (4) SPRQ

Q.32 Strong
P: the making to the curb the
Q: in various government departments
R: practices of nepotism
S: measures are in
(1) RPSQ (2) SQRP
(3) RQSP (4) SPRQ

Direction (Question. 33 to 40) : In these questions, you have two brief passages with 4 questions following each passage. Read the passage carefully and choose the best answer out of the four alternatives.

PASSAGE - 1 : The people I was to meet were all Indians, of the professional classes - doctors, lawyers, public servants, professors at the university, businessmen. Many of them were old friends or sons of old friends. I did not see much of the countryside nor of the industrial conditions. The big change I noticed was the increased interest in politics. You cannot understand the modern Indians unless you realize that politics occupies them passionately and constantly, that artistic problems, and even social problems are subsidiary.

Their attitude is unsound, and used to say so; still there it is, and they hold it much more vehemently than they did a quarter of a century ago. When i spoke about the necessity of form in literature and the importance of individual vision, their attention wandered, although they listened politely. Literature in their view should expound or inspire a political creed.

Q.33 What is the attitude of a modern India?
(1) First he must improve our economic standard
(2) First he must remove social evils from the land
(3) First he must find solution to the artistic and cultural problems
(4) First he must find the correct political solution

Q.34 'Countryside' implies
(1) Rural area
(2) One side of the country
(3) To take sides with one's other country
(4) All the four sides of the country

Q.35 The word 'subsidiary' in the passage means
(1) Of lesser importance
(2) That which subsidises
(3) Residency
(4) Subsequent

Q.36 Whom did the author meet?
(1) Professionals (2) Workers
(3) Diplomats (4) Spirituals

PASSAGE - 2 : Even though every interview is a vital occasion, it should not be taken SERIOUSLY. Most of

the candidates feel extremely self-conscious and nervous a little before the interview. They brood much over the occasion, trying to calculate their chances of success. All this makes them a little more abnormal and they are unable to display their natural qualities before the board. They stammer and fumble in speech, look pale and scared and behave even awkwardly and shabbily in and out of the interview room. It is, therefore, very essential that the interviews should keep their mind off the experience they are going to pass through. They must face the occasion as stoically and realistically as possible. The motto of every interviewee should be "hope for the best but expect the worse"

Q.37 Antonym of 'extremely' is

- (1) A little (2) Non sensically
(3) Unshabbily (4) None of these

Q.38 'Stoically' means

- (1) Factually
(2) Fatally
(3) Hopefully
(4) Without feeling pleasure or pain

Q.39 Before the interview, most of the candidates feel

- (1) Serious
(2) Nervous
(3) Awkward and shabby
(4) Pale and scared

Q.40 A candidate fares before a committee

- (1) Courageously (2) Awkwardly
(3) Nervously (4) Sacredly

*** MATHEMATICS ***

Q.41 6 Horses are worth 9 Camels, 27 camels are worth 30 Bicycles and 300 Bicycles are worth 9 Motor -Cars. If 3 Motor-Cars are worth Rs 72000, find the price of one horse:

- (1) Rs. 1000 (2) Rs. 1200
(3) Rs. 1400 (4) None of these

Q.42 If $\frac{\sin\theta}{x} = \frac{\cos\theta}{y}$, then $\sin\theta - \cos\theta = ?$

- (1) $\frac{x+y}{\sqrt{x^2+y^2}}$ (2) $\frac{x-y}{\sqrt{x^2+y^2}}$
(3) xy (4) $\frac{x-y}{\sqrt{x^2-y^2}}$

Q.43 If $x = \frac{1+\cos\theta}{\sin\theta}$ and $y = \frac{1-\cos\theta}{\sin\theta}$, find the relationship between x and y:

- (1) $x = y$ (2) $x = \frac{1}{y}$
(3) $x = -y$ (4) $x - y = 1$

Q.44 The points $(2a, 4a)$, $(2a, 6a)$ and $(2a + \sqrt{3}a, 5a)$ are the vertices of:

- (1) An equilateral triangle
(2) Right angle triangle
(3) Scalene triangle

(4) Isosceles triangle

Q.45 Three pipes A, B and C can fill a tank from empty to full in 20 mints, 10 mints and 30 mints respectively. When the tank is empty, all the three pipes are opened. A, B and C discharge chemical solutions x, y and z respectively. What is the proportion of solution 'y' in the liquid in the tank after 3 mints?

- (1) $\frac{6}{11}$ (2) $\frac{7}{11}$
(3) $\frac{8}{11}$ (4) $\frac{5}{11}$

Q.46 A hemispherical depression is cut out from one face of the cubical wooden block such that the diameter 'l' of the hemisphere is equal to the edge of the cube. Determine the surface area of the remaining solid.

- (1) $\frac{l^2}{4}(24 - \pi)$ (2) $\frac{l^2\pi}{4}$
(3) $\frac{l^2}{4}(24 + \pi)$ (4) $\frac{l^2}{2}(24 + \pi)$

Q.47 A man can row 60 km upstream and 88 km downstream in 20 hrs. Also, he can row 80 km upstream and 110 km downstream in 26 hrs. Find the rate of current.

- (1) 3 km/hr (2) 2 km/hr
(3) 6 km/hr (4) 5 km/hr

Q.48 In a certain code language:

- (i) 'Jad Mhao' means 'Red Rose'
(ii) 'Rus San' means 'Beautiful Picture'
(iii) 'San Mhao Ne' means 'Red And Beautiful'
Which word in that language means 'And'?
- (1) Jad (2) Mhao
(3) Rus (4) Ne

Q.49 A shoe shop keeps a record of the number of pairs of shoes sold daily. The record of actual sales for a week (Monday to Sunday) was lost. The manager could only get the following table which showed how much the sale had increased or decreased over the previous day's sale:

Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.
+ 1	+ 1	+ 2	- 11	+ 7	- 7	0

If "a" is the mean of daily sale for the week and "b" is the mode of daily sale for the week, then what is the value of a - b?

- (1) 10 (2) 15
(3) 5 (4) 18

Q.50 Find the value of:

- $\left[7\frac{1}{2} + \frac{1}{2} \div \frac{1}{2} \text{ of } \frac{1}{4} - \frac{2}{5} \times 2\frac{1}{3} \div 1\frac{7}{8} \text{ of } \left(1\frac{2}{5} - 1\frac{1}{3}\right)\right]$
- (1) $4\frac{1}{30}$ (2) $2\frac{1}{30}$
(3) $15\frac{1}{2}$ (4) $16\frac{1}{2}$

Q.51 A dice has it 6 faces marked 0, 1, 1, 1, 6 and 6. Two such dice are thrown together, and the total score is recorded. How many different scores recorded are possible?

- (1) 5 (2) 4

- (3) 3 (4) 6

Q.52 Which of the following is a rational number?

- (1) $(\sqrt[4]{2})^2$ (2) $(\sqrt[4]{2^3})^3$
(3) $(\sqrt[4]{2^3})^4$ (4) $(\sqrt[4]{2})^3$

Q.53 Find the sum of an A.P. Whose first term is a, second term is b and the last term is c.

- (1) $\frac{(a+c)(b+c-a)}{b-a}$ (2) $\frac{(a+c)(b+c-a)}{2(b-a)}$
(3) $\frac{(a+c)(b+c-2a)}{2(b-a)}$ (4) $\frac{(a+c)(b+c+a)}{2(b-a)}$

Q.54 At 't' minutes past 8 pm, the time needed by the minutes hand of a clock to show 9 pm was found to be 3 minutes less than minutes $\frac{t^2}{4}$ minutes. Then 't' equals:

- (1) 14 minutes (2) 10 minutes
(3) 4 minute (4) 9 minutes

Q.55 If the zeroes of the polynomial $x^3 - 3x^2 + x + 1$ are p - q, p and p + q. Find the value of q.

- (1) 1 (2) 0
(3) 2 (4) $\pm \sqrt{2}$

Q.56 To divide a line segment AB in the ratio p : q (p and q are natural numbers), draw a ray AX such that $\angle BAX$ is an acute angle and then mark points on ray AX at equal distances such that the minimum number of these points are:

- (1) p - q (2) pq
(3) q - 1 (4) p + q

Q.57 If MACHINE is coded as 19-7-9-14-15-20-11, how will you code DANGER?

- (1) 10-7-20-13-11-24 (2) 10-7-20-16-11-24
(3) 13-7-20-9-11-15 (4) 13-7-20-10-11-25

Q.58 Arrange the following in a meaningful sequence.

- (a) Site (b) Plan (c) Rent (d) Money (e) Building
(1) (d)(a)(b)(e)(c) (2) (c)(d)(b)(e)(a)
(3) (b)(c)(e)(a)(d) (4) (a)(b)(c)(e)(d)

Q.59 Pointing to a man in photograph, a woman said, 'His brother's father is the only son of my grandmother, 'How is the women related to the man in the photograph'?

- (1) Mother (2) Aunt
(3) Sister (4) Daughter

Q.60 In a certain language 'La Pil Ta' means 'Mango is Sweet', 'Na Sa Pil' means 'Mango and Banana' and 'Ba Ta Tik' means 'Boy is Wise'. In that language 'Sweet' means:

- (1) La (2) Pil
(3) Sa (4) Ba

Q.61 Find a wrong number in the series: 8, 13, 21, 32, 47, 63, 83.

- (1) 13 (2) 21
(3) 32 (4) 47

Q.62 If a, b, c are the sides of a right triangle where 'c' is the hypotenuse then the radius 'r' of the circle which touches the sides of the triangle is:

- (1) $r = \frac{a+b+c}{2}$ (2) $r = \frac{b+c-a}{2}$
(3) $r = \frac{a+b-c}{2}$ (4) $r = \frac{a+c-b}{2}$

Q.63 Abdul, Beena, Chitra and Danny all took the same test. The average score of all four candidates was 64; Abdul and Beena had an average of 64; Abdul and Danny had a average of 52, while Beena and Danny had an average of 72. What was Danny's score:

- (1) 60 (2) 64
(3) 68 (4) 72

Q.64 My brother is 562 days older to me while my sister is 75 weeks older to him. If my sister was born on Tuesday, on which day was I born?

- (1) Sunday (2) Thursday
(3) Wednesday (4) Monday

Q.65 The interior of building is in the form of a right circular cylinder of radius 7 m and height 6 m, surmounted by a right circular cone of some radius and vertical angle 60° . Find the cost of painting the building from inside at the rate of Rs. 30/m².

- (1) Rs. 1760 (2) Rs. 16710
(3) Rs. 17160 (4) Rs. 27680

Q.66 $2\frac{6}{13} + \frac{14}{3 \times ?} + \frac{7}{13} = 3\frac{14}{39}$

- (1) 2 (2) 4
(3) 9 (4) 13

Q.67 $(-2)^{(-2)^{(-2)}} = ?$

- (1) 12 (2) 14
(3) 15 (4) 16

Q.68 A cylindrical tennis ball container contains three balls stacked on one another, such that they touch the wall of the container. The top and bottom balls also touch the lid and the base of the container respectively. If the volume of a tennis ball is 160 cm³, then what is the volume of the container?

- (1) 720 cm³ (2) 840 cm³
(3) 1440 cm³ (4) 480 cm³

Q.69 Find the missing term in the following series: 17, 33, 68, 133, 270,

- (1) 535 (2) 545
(3) 555 (4) 565

Q.70 From the top, the angle of depression of an object on the horizontal ground is found to be 60° . On descending 20 m vertically downwards from the top of the tower, the angle of depression of the object is found to be 30° . Find the height of the tower.

- (1) 10 m (2) 20 m
(3) 30 m (4) 40 m

Q.71 $(-1)^n + (-1)^{8n} = 0$, when 'n' is:

- (1) any positive integer
- (2) any odd natural number
- (3) any even natural number
- (4) any negative integer

Q.72 Choose the odd numeral pair in the following question:

- (1) $48 - 134$ (2) $40 - 110$
- (3) $18 - 48$ (4) $30 - 80$

Q.73 Had Ajita scored 10 more marks in the Maths test out of 30 marks, 9 times these marks would have been the square of her actual marks. How many marks did she get in the test?

- (1) 15 (2) 6
- (3) 23 (4) 20

Q.74 In a frequency distribution, the mid value of a class is 10 and the width of the class is 6. The lower limit of the class is:

- (1) 6 (2) 7
- (3) 8 (4) 12

Q.75 Simplify $\frac{11^3 + 13^3 + 15^3 - 3 \times 11 \times 13 \times 15}{11^2 + 13^2 + 15^2 - 11 \times 13 - 13 \times 15 - 165} = ?$

- (1) 39 (2) 53
- (3) 17 (4) None

Q.76 The mean, median and mode of the data set 3, 4, 5, 8, x are the same. What number does 'x' represent?

- (1) 7 (2) 8
- (3) 10 (4) 9



Q.77 The sides of triangle are 3 cm, 4 cm and 5 cm. The area of the triangle formed by joining the mid points of this triangle is:

- (1) 3 cm^2 (2) 6 cm^2
- (3) $\frac{3}{2} \text{ cm}^2$ (4) $\frac{3}{4} \text{ cm}^2$

Q.78 Thirty six vehicles are parked in a parking lot in a single row. After the first car, there is one scooter. After the second car, there are two scooters. After the third car, there are three scooters and so on. Work out the number of scooters in the second half of the row.

- (1) 10 (2) 12
- (3) 15 (4) 17

Q.79 Find the co-ordinates of the circum centre of the triangle whose vertices are (3, 0), (- 1, - 6) and (4, - 1).

- (1) 1, - 3 (2) - 3, 1
- (3) 2, - 5 (4) 3, - 5

Q.80 If 'A' is denoted by 2, 'B' by 4, 'C' by '6' and so on, then what will be the sum of the numeric values of the letters of the word 'OWL'?

- (1) 110 (2) 90
- (3) 100 (4) 102

Q.81 If REASON is coded as 5 and BELIEVED as 7, what is the code number for GOVERNMENT?

- (1) 6 (2) 8
- (3) 9 (4) 10

Q.82 In a sequence of positive integers, every term after the second term is the sum of the two previous terms. If the third term is 9 and the fifth term is 19, the sixth term is:

- (1) 29 (2) 19
- (3) 48 (4) 28

Q.83 Mr. A, Miss. B, Mr. C and Miss. D are sitting around a table and discussing their trades:

- (a) Mr. A sits opposite to cook
- (b) Miss B sits right to the barber
- (c) The washerman is on the left of the tailor
- (d) Miss D sits opposite to Mr. C

What are trades of A and B?

- (1) Tailor and Barber (2) Tailor and Cook
- (3) Barber and Cook (4) Washerman and Cook

Q.84 If \times means addition, $<$ means minus, $>$ means multiplication, $+$ means division, $-$ means equal to, \div means greater than and $=$ means less than, which one of the alternatives is correct?

- (1) $8 < 4 \times 3 - 3 \times 2 \times 1$
- (2) $8 > 4 < 3 - 3 > 2 < 1$
- (3) $8 + 4 < 3 \div 3 < 2 < 1$
- (4) $8 + 4 \times 3 = 3 > 2 \times 1$

Q.85 Simplify: $2 + \frac{1}{2 + \frac{1}{1 + \frac{1}{1 + \frac{1}{6}}}}$

- (1) $\frac{77}{33}$ (2) $\frac{76}{33}$
- (3) $\frac{79}{33}$ (4) $\frac{78}{33}$

Q.86 The vertices of a ΔABC are (- 2, 1), (5, 4) and (2, - 3) respectively. Find the length of altitude through A.

- (1) $\frac{40}{\sqrt{58}}$ (2) $\frac{10}{\sqrt{58}}$
- (3) $\frac{20}{\sqrt{58}}$ (4) $\frac{30}{\sqrt{58}}$

Q.87 Find the least number which when divided by 2, 3, 4, 5, 6 leaves the remainder 1, 2, 3, 4 and 5 respectively.

- (1) 100 (2) 617
- (3) 59 (4) None

Q.88 Choose the missing term from the given options:

ZBAWO, YABVN, XZCUM, _____.

- (1) WYDTL (2) UYDTL
(3) WDYTL (4) WYDTM

Q.89 A merchant has three kinds of wine; of the first kind 403 gallons, of the second 527 gallons and of the third 589 gallons. What is the least number of full casks of equal size in which this can be stored without mixing?

- (1) 11 (2) 21
(3) 31 (4) 41

Q.90 In the following number sequence, how many such even numbers are there which are exactly divisible by its immediate preceding number but not exactly divisible by its immediate following number?

3 8 4 1 5 7 2 8 3 4 8 9 3 9 4 2 1 5 8 2

- (1) One (2) Two
(3) Three (4) Four

Q.91 How many $\frac{1}{8}$'s are there in $37\frac{1}{2}$?

- (1) 100 (2) 300
(3) 500 (4) 800

Q.92 If the 1st and 6th letters of the word 'PHOTOGRAPH' are interchanged, also 2nd and 7th letters, and so on, which of the following would be the 4th letter from your right?

- (1) H (2) A
(3) O (4) T

Q.93 The letters L, M, N, O, P, Q, R, S and T in their order are substituted by nine integers 1 to 9 but not in that order, 4 is assigned to P. The difference between P and T is 5. The difference between N and T is 3. What is the integer assigned to N?

- (1) 4 (2) 5
(3) 6 (4) 7

Q.94 The difference between the area of a regular hexagon of side 72 cm and that of the circle circumscribing it is:

- (1) $2592(2\pi - 3\sqrt{3}) \text{ cm}^2$ (2) $1944(2\pi - 4\sqrt{3}) \text{ cm}^2$
(3) $972(2\pi - \sqrt{3}) \text{ cm}^2$ (4) None of these

Q.95 Kailash faces towards north. Turning to his right, he walks 25 metres. He then turns to his left and walks 30 metres. Next, he moves 25 metres to his right. He then turns to his right again and walks 55 metres. Finally, he turns to the right and moves 40 metres. In which direction is he now from his starting point?

- (1) South - west (2) South
(3) North - west (4) South-east

Q.96 On simplifying $\frac{2^{m+3} \times 3^{2m-n} \times 5^{m+n+3} \times 6^{n+1}}{6^{m+1} \times 10^{n+3} \times 15^m}$

- (1) 0 (2) 1
(3) 2 (4) None

Q.97 Three equal circles of unit radius touch each other. Then area of the circle circumscribing the three circles is:

- (1) $\frac{\pi}{3}(2 - \sqrt{3})^2$ (2) $\frac{\pi}{3}(2 + \sqrt{3})^2$
(3) $6\pi(2 + \sqrt{3})^2$ (4) $\frac{1}{6}\pi(2 + \sqrt{3})^2$

Q.98 The sum of all the numbers between 1 and 1000, which are divisible by 5 but not 2 is:

- (1) 101100 (2) 50000
(3) 50050 (4) 101000

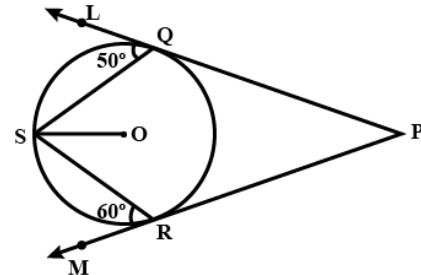
Q.99 The annual salary of Mr. Nair for the year 2010 is Rs. 40,000. Every year salary increases by Rs. 4000. At the beginning of the year 2010 he had borrowed a sum of Rs. 44,000 from a bank. Using the following information, determine the number of year he will take to repay the principal:

(a) The interest due for payment is Rs. 3600 at the end of the year 2010 and increases by Rs. 800 every year thereafter.

(b) Each year he is going to pay the bank 20% of his annual income towards loan payment:

- (1) 10 years (2) 12 years
(3) 7 years (4) 20 years

Q.100 In figure, PQ and PR are tangents to the circle with center O and S is a point on the circle such that $\angle SQL = 50^\circ$ and $\angle SRM = 60^\circ$. Find $\angle QSR$.



- (1) 55° (2) 60°
(3) 65° (4) 70°



CONTACT AT +91-9041536379
FOR MAHARAJA RANJIT SINGH ACADEMY'S
AFPI ENTRANCE EXAM PREPARATION

RECOMMENDED CADET
JAGBIR SINGH

Recommended Booklet
for AFPI



UNDER THE GUIDANCE OF PRABHJOT SIR & TEAM