Test Booklet Code A

Test Booklet Serial No.

#### MAHARAJA RANJIT SINGH AFPI

#### 14 JANUARY 2024

Time: 180 minutes

	ROL	.L NO.:	NAME:				
SIGNATURE:			DATE/TIME:				
		INSTRUCTIONS	S FOR THE CANDIDATES				
ľ	1.	The question booklet contains English	Section (Q 1-40), Mathematics Section (Q 41-120) and				
		Social Studies (Q 121-150). All question	ons are compulsory.				
	2.	Before attempting the paper carefully r	ead the Instructions on the Answer Sheet (OMR Sheet)				
		supplied separately.					
	3.		ensure that all pages of your Test Booklet are properly				
			ged in any manner and contains 150 questions. In case				
			d immediately report the matter to the invigilator for				
		*	aim in this regard will be entertained at a later stage.				
	4.	01	ided separately along with this Test Booklet. Please fill				
		1	r, Test Booklet Serial No., Centre Number, etc. in the				
		spaces provided on the OMR Answer Sheet and put your signature in the box provided for this					
	5.	purpose.	oklet Code Serial No. on Side 2 of the OMR Answer				
	5.		Code is left blank or more than one Booklet Code is				
		-	be an incorrect Booklet Code and the Answer Sheet will				
			elf will be solely responsible for all the consequences				
		arising out of any error or omission in					
ľ	6.		es containing 150 questions & pages for rough				
			native choices (1), (2), (3), (4) are given, out of which				
			answer by darkening the suitable circle with				
			ver Sheet supplied to you separately. USE OF PENCIL				
		IS STRICTLY PROHIBITED. More	than one answers indicated against a question will be				
		deemed as incorrect response.					
	7.	_	estion carries four (4) marks. There will be negative				
		marking of minus one (-1) for each in					
	8.		n the OMR Answer Sheet. Any stray mark or smudge				
			en as a wrong answer. Any damage to the OMR Answer				
	0	Sheet may result in disqualification of					
	9.	-	must hand over the OMR Answer Sheet to the				
	10		The Question Booklet may be retained.				
	10.	Use of Mobile phones, wrist watches					
	11.	keep all your belongings outside the the ADMIT CARD.	Examination Hall. Do not retain any paper except				
1							

Marks: 600

#### SECTION-ENGLISH

**Directions (Questions 1 to 10).** In these questions, you have two brief passages with five questions following each passage. Read the passage carefully and choose the best answer out of the four alternatives

#### PASSAGE 1

We give undue importance to our health and the treatment of diseases. A large number of medicines treat only the symptoms of the disease, and not the root cause. In fact, the cause of many chronic ailments is still being researched. It is here that Yoga therapy comes to our assistance. Yoga emphasizes treatment of the root cause of an ailment. It works in a slow, subtle and miraculous manner. Modern medicine can claim to save a life at a critical stage, but, for complete recovery and regaining of normal health, one must believe in the efficiency of Yoga therapy.

The Yogic way of life includes a code of ethics, regulations, discipline, combined with prayer and meditation. Even a discussion of these subjects helps one relieve mental tensions and change attitudes. Simple asanas help to stretch and relax the whole body and release tensions. The sincere practice of Yoga postures is beneficial for the mind and body.

The continued practice of Yoga has a profound effect on the inner dimensions of life. Yoga aims at developing the mental, physical, spiritual and emotional faculties. Other forms of physical exercises, like aerobics, assure only physical well-being. They have little to do with the development of the soul and mind.

- 1. How does yoga therapy work?
  - 1. helps one relieve mental tensions and change attitudes
    - 2. helps in developing mental, physical, spiritual and emotional faculties
    - 3. has a code of ethics, regulations, discipline, combined with prayer and meditation
  - 4. in a slow, subtle and miraculous manner
- 2. How is yoga different from other forms of treatment?

1. It claims to save life at a critical stage. 2. It treats the symptoms of the disease.

- 3. It treats the root cause of the disease. 4. It assures physical well-being.
- 3. What does the phrase 'Chronic ailments' refer to?

1. diseases which affect the	mind	2.	diseases th	nat	are r	ecurre	nt and	las	t long
									•

- 3. diseases which affect the body 4. diseases which get cured in a short time
- 4. Why is yoga better than physical exercise?

it assures physical well-being 2. it aims at developing mental, physical, spiritual & emotional faculties 3. it does not have anything to do with the development of the mind 4. it relaxes the body

5. How does sincere practice of yoga benefit us?

1. it is beneficial for the mind and body. 2. it is beneficial to cure diseases 3. it assures physical well-being 4. it combines prayer with meditation

#### PASSAGE-2

Keep your watch accurate. For some people, moving up the time on their watch will help them get up earlier. For others, they will remember that the time on the watch is wrong and will disregard it altogether. It may be helpful to set your watch just two minutes ahead instead of five or ten. Keep a clock, phone, computer or anything that displays time in each room of your house. One of the easiest ways to run late is simply by not realizing that the time is passing as quickly as it is. Set all your clocks and watches to the same time. Don't be an optimist. Things usually take longer than what you'd expect, even without major delays. If you have a dinner appointment at 7:30 p.m., don't think you can work till 7 p.m., then take a bath, dress and reach on time. Realistically, calculate the time you will take at each step and then add 10 minutes more to allow for unexpected delays, or you cannot get your job done in time.

Wake up when you are supposed to wake up. Don't hit the snooze button, keep on lying in bed, or watch TV at the very start of your day. May be you can try even setting your clock 10 minutes earlier than you need. If you have difficulty with this, move your alarm clock to somewhere away from your bed; that way, you will have to get up to turn it off. Commit yourself to being 15 minutes early for everything. If you have to reach your place of work at 8:00, don't even tell yourself this. Just tell yourself, "I have to be at work at 7:45." If you do this, you will be on time even with little unforeseen delays. You will be on time even with a traffic jam.

uciay	s. Tou will be on time even with a traffic jam.
6.	The narrator does not deny which of the following activity just after waking up:
	1. hitting snooze button 2. keep on lying in bed 3. watching TV 4. wake up when you actually have to
7.	It is good to commit yourself for everything.
	1. to be late 2. to delay 3. to being 15 minutes early 4. to search the last moment
8.	The passage highlights:
	<ol> <li>the value of time 2. the importance of being ahead of time</li> <li>the value of being up to time 4. the value of calculating time</li> </ol>
9.	We should be in approach to time management.
	1. optimistic 2. pessimistic 3. realistic 4. utopian
10.	One of the major reasons for being delayed is
	<ol> <li>absence of clock, phone or computer 2. overindulging in work</li> <li>not realising that time passes quickly 4. not keeping a margin in the expected time of work</li> </ol>
Dire	ctions (Questions 11 to 15). Find the correctly spelt word out of the four alternatives
11.	1. acqueisce 2. acquiesce 3. aquiesce 4. acquiesce
12.	1. ingeinous 2. ingenous 3. ingenious 4. inigenious
13.	1. mischievuous 2. mischeivous 3. misichievous 4. mischievous
14.	1. acommodate 2. accomodate 3. accocmodate 4. accommodate
15.	1. sacrilegious 2. sacrelegious 3. sacrilegius 4. sacrilegius

Dire	ctions (Questions 16 to 20). In these questions, out of the four alternatives, choose the one
	h best expresses the meaning: -
	Clever
	1. Studious 2. Ingenious 3. Accomplished 4. Knowledgeable
17.	Adjacent
	1.Opposite 2. Amazing 3. Courageous 4. Closest
18.	Awful
	1. Chilly 2. Contaminated 3. Tedious 4. Abominable
19.	Comparing
	1.speaking 2. collating 3. castigating 4. refusing
20.	Likely
<b>D</b> •	1.earliest 2.quickest 3.probable 4. injurious
	ctions (Questions 21 to 25). Choose the alternative which best expresses the meaning of the m/phrase in <i>italics</i> in the sentence.
	He was not playing as he was <u>under the weather</u> .
	1.angry 2. studying 3. unwell 4. obstinate
22.	Rohan took the scolding <i>with a pinch of salt</i> .
	1. seriously 2. to heart 3. casually 4. was very upset
23.	He goes to school come <u>rain or shine</u>
	1. once in a while 2. rarely 3. when called 4. regularly
24.	So many people are trying to quit smoking, I might as well <i>jump on the bandwagon</i> .
	1. follow the trend 2. join the smokers 3. learnt to like smoking 4. liked the band
25.	In the interview he was <i>beating around the bush</i> .
	1.answering questions 2. doing well 3. very frank 4. avoiding saying something
	ctions (Questions 26 to 30). In these questions, choose the word which is the closest opposite in ning of the given word.
26.	Placid
	1. calm 2. sharp 3. adventurous 4.clamorous
27.	Economize
	1. save 2. waste 3. hoard 4. Deficient
28.	Abolish
	1.establish 2. annul 3. abrogate 4. renounce
29.	Alleviate
	1.abate 2.aggravate 3.repungent 4. relieve
30.	Barren
	1. sterile 2. desolate 3. coarse 4. fertile

Dire	ctions (Questions 31 to 32). Fill in the blanks with a word from amongst the choices given
31.	His mother's health took a for the worse during the winters.
	1. beating 2. turn 3. improvement 4. bend
32.	Post elections the Government is
<b>D</b> !	1. constituted 2. declared 3. formed 4. invited
	ctions (Questions 33 to 34). In these questions, out of the four alternatives, choose the one in can be the appropriate substitute
	The lowest moment in a particular situation.
55.	The lowest moment in a particular situation.
	1. zenith 2. nadir 3. apogee 4. Acme
34.	A 5 line poem with a single stanza whose subject is a short tale or description
	1. allegory 2. sonnet 3. limerick 4. elegy
Dire	ctions (Questions 35 to 36). Reorder P, Q, R, S to make meaningful sentences.
35.	P: our gratitude Q: we have R: to them S: to show
26	1. QPRS 2.QSRP 3. QSPR 4.PSQR
36.	P: had travelled Q: a long way and R: was tired S: last night the old man.
	1. SPQR 2. SRPQ 3.SPRQ 4. RQPS
Dire	<b>ctions (Questions 37 to 38)</b> . A part in the following sentences is underlined, which may/may
	be correct. Improve the sentence by choosing one of the options. If no improvement is possible
	se the option accordingly.
	Everyone <b><u>remained</u></b> silent and no one comes forward for the change.
	1. has remained 2. am remained 3. no improvement 4. remains
38.	
	1. are planning2. have planning3. am planning4. no improvementctions (Questions 39 to 40)Fill the blanks with the appropriate option from the four.
39.	Time travel become a reality in the near future
	1 sucht to 2 should 2 sould 4 will
40	1. ought to 2. should 3. could 4. will However aballances must be overcome, such as answring safety and affordability for
40.	However, challenges must be overcome, such as ensuring safety and affordability for all potential time-travellers
	1. most 2. much 3. minor 4. many

	SECTION-MATHEMATICS							
41.					ass. If a candidate, who gets			
	210 marks, fa	ils by 50 mark	s, find the max	ximum marks.				
	1 400	2 425	3 325	4 321				
42.	If $\frac{20 + 8 \times 0.05}{20 + 8 \times 0.05}$	$\frac{2.425}{5} = 16$ , where	$\frac{3.323}{2}$ $\frac{1}{2}$ what	is 12 ?				
	$\frac{11}{40-y}$	10, where	$y \neq \pm 0$ , what	15 <i>y</i> :				
	1 38 725	2. 38.275	3 38 425	4.38.575				
43.		$\frac{2.33.273}{3.79 \times 37 + 3.7}$						
			1					
	1.739		3. 179	4. 171				
44.	If $13324 \div 14$	45 = 91.9, then	what is the va	alue of 133.24	÷ 9.19?			
	1. 12.5	2.1.5	3. 4.5	4, 14,5				
45.		54, then what is						
		$0.2916 + \sqrt{0.00}$		002016 ?				
	$\sqrt{29.10} + \sqrt{0}$	$0.2910 \pm \sqrt{0.00}$	$12910 \pm \sqrt{0.00}$	002910 :				
	1.0.594	2. 5.	9994 3. 5	5.994	4. 5.004			
46.	If $1.5r = 0.05$	5y, then what i	s the value of	$y - x_{2}$				
	11 1.5x = 0.01	y, then what I	s the value of	$\overline{y+x}$				
	1. 0.935		35		4. 1.995			
47.					nge after every 48 sec., 72 sec.,			
		ill they again of			ously at 8:20:00 hrs, then in how			
	much time w	in they again t	mange sinnuna	incousity?				
	1. 212 sec	2. 22	32 sec	3. 432 sec	4. 302 sec			
48.					nto the largest possible equal			
			f boys number	rs the same as	each class of girls. What is the			
	number of cl	asses?						
	1.19	2. 2	23	3.17	4. 7429			
49.	A sum of Rs	. 3115 is divid	ed among A, I	B and C such	that if Rs. 25, Rs. 28 and Rs. 52			
			nares respectiv	vely, the remain	inders shall be in the ratio of 8 :			
	15 : 20, then	A's share is						
	1. Rs 585	2.1	Rs 675	3. Rs 545	4. Rs 785			
50.	The value of	k for which -	4 is a zero of t	he polynomial	$\frac{4. \text{ Rs 785}}{1 p(x) = x^2 - x - (2k + 2) \text{ is}}$			
	1.6	26	39	4.9				
51.	The tops of t	wo notes of he	johts 20 m and	d 14 m are cor	nnected by a wire. If the wire			
51.	-	-	-		gth of the wire is			
	1.6 m	2.8	3 m	3. 10 m	4. 12 m			
52.								
32.	If $x = \frac{\sqrt{m+1}}{\sqrt{m+1}}$	$\frac{n}{n} + \sqrt{(m-n)} \\ \frac{n}{n} - \sqrt{(m-n)}$	, <i>n</i> in terms of	f $x$ and $m$ is eq	ual to			
	$\sqrt{(m+)}$	$n) - \sqrt{(m-n)}$						
	2 <i>mx</i>		2mn	mv	2mr			
	$1.\frac{2mx}{x^2+1}$	2.	$\frac{2mn}{x^2+1}$	3. $\frac{mx}{x^2+1}$	$4.\frac{2mx}{x+1}$			

53.	A contractor undertakes to dig a canal 12 km long in 350 days and employs 45 men. After 200 days he finds that only 4.5 km of the canal has been completed. Find the number of extra men he must employ to finish the work in time.							
	1. 55	2.60	3. 54	4. 64 days				
54.	1.55 If $\frac{x^2 + y^2}{x^2 - y^2} = 2\frac{1}{8}$ , t	then $\frac{x^3 + y^3}{x^3 - y^3}$ is		ž				
	$1.\frac{5}{9}$	$2.\frac{5}{3}$	$3.\frac{25}{9}$	$4. \frac{125}{27}$				
55.	If $\frac{\sqrt{3x+4} + \sqrt{3x-5}}{\sqrt{3x+4} - \sqrt{3x-5}} = 9$ , then the value of x is equal to							
	1.0	2. 11	3.7	4. 10				
56.	If $x + y = 2z$ , then	the value of $\frac{x}{x-z}$	$+\frac{z}{y-z}$ is					
	1.3	2.4	3.2	4. 1				
57.	If the 3rd and the	9 <sup>th</sup> terms of an AP as	re 4 and –8, respect	ively, then which term of this				
	AP is zero?							
	1. 7 <sup>th</sup> term	2. $6^{\text{th}}$ term	3. $5^{\text{th}}$ term	4. 4 <sup>th</sup> term				
58.	If $\triangle$ ABC ~ $\triangle$ RPC then QR is	Q, AB = 3 cm, BC =	5  cm, AC = 6  cm,	RP = 6  cm and  PQ = 10  cm,				
	1. 9 cm	2. 10 cm	3. 6 cm	4. 12 cm				
59.				e. He sold it at a 40% increase e make on the original price?				
	1.8%	2.10 %	3. 12 %	4.5%				
60.		0 m long casts a sha ow 50 m long on the	-	the ground, at the same time a t of the tower is				
	1. 75 m	2. 100 m	3. 150 m	4. 50 m				
61.	If $a + b + c = 10 a$	nd $ab + bc + ac = 3$	1, then the value of	$a^2+b^2+c^2$ is				
	1. 69	2.162	3. 131	4. 38				
62.	A quadratic polyne	omial whose zeroes	are -3 and 4 is					
	1. $x^2 - x + 12$	$2.\frac{x^2}{2} - \frac{x}{2} - 6$	3. $x^2 + x + 12$ 4.	$2x^2 + 2x - 24$				

(2)			4 10 14 01					
63.	The pair of linear equations $2x + 3y = 4$ and $3x + 4y = 9$ has							
	1. No solution	2. One solution 3.	Two solutions	4. Infinitely many				
	solutions			• •				
64.				e age of father will be four				
	times his son. The	e present age of father	is					
	1.34 years $2$	35 years 3. 36 year	s = 1.37 years					
65.	Rahul can row a l	boat 4 km upstream in	$\frac{3}{1}$ hour and 32 km do	ownstream in 4 hours. The				
	speed of boat in s	till water and the speed	l of stream respectiv	ely are				
		n/hr 2.6 km/hr&4 km	/hr $3.6 \text{ km/hr}\&2 \text{ k}$	.m/hr 4. 10 km/hr&4				
66.	km/hr For what value of	k, the roots of the equ	ation $r^2 + Ar + k - 0$	are real?				
00.		k, the roots of the equ	a(10)(x) + 4x + k = 0	are rear.				
	$1. k \leq 4$	$2. k \geq 4$	3. k < 4	$\frac{4. k > 4}{1000}$ and in order to reach the				
67.								
	destination 1500 km away in time, it had to increase its speed by 100 km/h from the usual speed, then its usual speed is							
	usual speed, then	its usual speed is						
	1. 700 km/hr	2. 300 km/hr	3. 200 km/hr	4.500 km/hr				
68.	1. 700 km/hr       2. 300 km/hr       3. 200 km/hr       4.500 km/hr         If sin (A + 2B) = $\frac{\sqrt{3}}{2}$ and cos (A + 4B) = 0, A > B, and A + 4B ≤ 90°, then A and B							
	If $sin (A + 2B) = \frac{1}{2} and cos (A + 4B) = 0$ , $A > B$ , and $A + 4B \le 90^\circ$ , then A and B							
	are respectively equal to							
	1,200 and $150$	2.459 and $209$	2 - 459  and  159	4.459 and $609$				
69.	If $\tan A + \cot A =$	$2.45^{\circ} \text{ and } 30^{\circ}$ = 4, then $\tan^4 A + \cot^4 A$	$3.45^{\circ}$ and $15^{\circ}$	4. 45° and 60°				
07.			r is equal to					
	1 194	$\frac{2.194}{\theta^3 \theta = \sin \theta \cos \theta \text{ and } x}$	3. 234	4 234				
70.	If $x \sin^3 \theta + y \cos^3 \theta$	$^{3}\theta = \sin\theta\cos\theta$ and $x$	$\sin \theta = y \cos \theta, \text{ then}$	$x^2 + y^2$ is equal to				
			3					
	1.2	2.1	$3.\frac{3}{4}$	4.0				
71.	The number of th	ree-digit numbers not	divisible by 5 are					
	1. 720	2.700	3. 180	4. 120				
72.		rgest circle that can be						
,			saun in a square o					
	1. 145 $cm^2$	2. $154 \text{ cm}^2$		$4.130 \text{ cm}^2$				
73.		The number of lead balls of diameter 1 cm each that can be made from a sphere of						
	diameter 16 cm is	5						
	1.7200	2.4000	3. 4096	4. 4200				
74.				boys such that each woman				
	may have 3 time	es as much as a boy,	and a man as muc	ch as a woman and a boy				
	together. The amo	ount of money a man re	eceives is					
	$1 \mathbf{P}_{\mathrm{S}} 80$	$2 \mathbf{P}_{\rm s} 60$	$2 \mathbf{p}_{\rm s} 100$	$A \mathbf{P}_{s} 5 6 0$				
	1. Rs 80	2.Rs 60	3. Rs 100	4. Rs 560				

75.				litres of water is added to he quantity of water in the
	1. 12 litres	2. 10 litres	3. 8 litres	4.9 litres
76.	The least numb	er that must be subtracted in proportion is		
	1.2	2.3	3.5	4. 6
77.	If $x$ , $y$ and $z$ are	2. 3 in continued proportion t	then $z : x :: z^2 : \boxdot$ , th	en 🖸 is
	1. v	2. $z^2$	3. $v^2$	4. $x^2$
78.	The distance be	$\frac{2. z^2}{\text{etween the points } (a \cos \theta)}$	$+b\sin\theta$ , 0) and (0,	$a\sin\theta - b\cos\theta$ ), is:
	1. $a^2 + b^2$	$2.\sqrt{a^2+b^2}$	3. $a^2 - b^2$	$4.\sqrt{a^2-b^2}$
79.	-			probability of drawing a e number of white balls in
	1.10	2. 12 3.	14	4.18
80.	The radius of travelling 11 kr	4	m. How many rev	4.18 volutions will it make in
	1. 500		3. 1500	4. 200
81.		nates of a point A, where	AB is the diameter of	of circle whose centre is
	1. (-2, 10)	2. (3, -12)	3. (-2, 8)	4. (3, -10)
82.	If $\tan x + \sin x$	$\frac{2. (3, -12)}{m \text{ and } \tan x - \sin x = n}$	then $m^2 - n^2$ is equal	to
	1. $4\sqrt{mn}$	2. $\sqrt{mn}$	3. $2\sqrt{mn}$	4. $3\sqrt{mn}$
83.	mark for each we marks been de	wrong answer. Had 4 mar	ks been awarded for et answer, then Yas	right answer and losing 1 each correct answer and 2 sh would have scored 50
	1.40	2.10	3.20	4. 23
84.		digits of a two – digit nu terchanged. Which of the		4. 23 btracted from the number, he digits of the number?
	1.8	2. 10	3. 12	4.18
85.		o similar triangles, $\Delta AE$ ne length of side XZ is 70		$\frac{4.18}{1089 \text{ cm}^2 \text{ and } 1225 \text{ cm}^2}$ gth of side AC?
	1. 72 cm	2. 66 cm	3. 60 cm	4. 64 cm

86.		of a town is 8000. If th vill be 8600. Find the n		b and the females by 10%, e town.					
	1. 3000	2. 4000	3. 5000	4. 5100					
87.	The area of the =3.14)	sector of a circle of ra	adius 6 cm whose cen	tral angle is 30°. (Take $\pi$					
	$1.9.42 \text{ cm}^2$	2. 8.42 $\text{cm}^2$	$3.7.42 \text{ cm}^2$	4. 8.42 $\text{cm}^2$					
88.	If 3 is a root of the equation $kx^2 - kx - 3 = 0$ , then the value of k is								
	1.3	2.4	3. $\frac{1}{2}$	4.2					
89.	If the first three terms of A.P. are $(3y - 1)$ , $(3y + 5)$ and $(5y + 1)$ , then the value of y is								
	1 3	$\frac{2.4}{8-a_{14}=32}$ , then the co	3.5	4.2					
90.	In an A.P., if $a_{13}$	$a_{14} = 32$ , then the co	ommon difference is						
	1.8	2 4	3 8	4.5					
91.	1.82 43 84.5The angle of elevation of the sun if the length of the shadow of a tower is $\sqrt{3}$ times that of its height is								
	1. 30°	2. $45^{\circ}$	$3.~60^{\circ}$	<b>4.</b> 90°					
92.	A chord of a circle of radius 10cm subtends a right angle at the centre. Find the area of the corresponding minor segment. (use $\pi = 3.14$ )								
	$1.20.5 \text{ cm}^2$	2. 30 $cm^2$	$3.28.5 \text{ cm}^2$	4. 25.5 $cm^2$					
93.	-	piece of paper of dime er of height 60 cm, the		is rolled to form a hollow cylinder.					
	1. 16 cm	2. 14 cm	3. 4 cm	4. 25 cm					
94.	504 cones, each of diameter 3.5 cm and height 3 cm, are melted and recast into a metallic sphere, then the diameter of the sphere is								
	1. 18 cm	2. 12 cm	3. 14 cm	4. 21 cm					
95.	The average score of boys in the examination of a school is 71 and that of the girls is 73. The average score of all students of the school in the examination is 71.8, then the ratio of number of boys to the number of girls who appeared in the examination.								
	1.3:2	2.1:2	3.2:3	4.2:1					
96.		om from the numbers 1		1 4. Another number y is bility that product of x					
	1. 0.75	2. 0.5	3. 0.25	4.0.02					
97.	are well shuffled	Three cards of spades are lost from a pack of 52 playing cards. The remaining cards are well shuffled and then a card was drawn at random from them. What is the probability that the drawn card is of clubs?							
	$1.\frac{23}{49}$	2. $\frac{1}{1}$	3. $\frac{10}{49}$	$4.\frac{13}{12}$					
	49	4	49	49					

98.	If the lines $3x + 2ky = -3$ and $2x + 5y + 2 = 0$ are coincident, then k is								
	1. $\frac{15}{4}$	2. $\frac{1}{4}$	3. $\frac{2}{5}$	4. $\frac{7}{5}$					
	4	4	5	5					
99.	-	e whose three vertices	s are $A(0, 3), O(0, 0)$ a	and $B(5, 0)$ . The length					
	of the diagonal is								
	1. 34 cm	$2.\sqrt{34}$ cm	$3.\sqrt{24}$ cm	4. 24 cm					
100.			ce of work in 5 days						
	boys can finish it in 7 days. Find the time taken by 1 man alone to finish the work.								
	1. 20 days	2. 35 days	3. 25 days	4. 70 days					
101.	A quadratic equation	whose sum and prod	uct of roots are $\frac{5}{6}$ and	- 1 respectively, is					
	$1.\ 6x^2 - 5x - 6 = 0$		2. $6x^2 + 5x - 6 =$	0					
	$3.\ 6x^2 + 5x + 6 = 0$		4. $6x^2 - 5x + 6 =$	0					
102.	If the n <sup>th</sup> term of an A	AP is $7 - 4n$ , then its c	common difference is						
	1.4	24	3.7	4. – 7					
103.	The number of multi	ples of 4 between 10	and 250 is						
	1. 50	2. 40	3. 60	4. 30					
104.	The sum of first n ter	rms of an AP is $3n^2 +$	5n, then 164 is its						
	1. 24 <sup>th</sup> term	2. 27 <sup>th</sup> term	3. 26 <sup>th</sup> term	4. 25 <sup>th</sup> term					
105.	The product of a man is	n's age 5 years ago an	d 5 years from now is	4. 25 <sup>th</sup> term s 600. His present age					
	1. 20 years	2. 25 years	3. 30 years	4. 35 years					
106.		ers of the prime factor							
	1.5	2.7	3.8	4. 12					
107.	If the area of a sector of the circle is	or is one twelfth that of	of the complete circle	4. 12 , then the central angle					
	of the chere is								
100	1.30°	$\frac{2.25^{\circ}}{\text{hen the value of } \tan^2\theta}$	3. 45°	4.60°					
108.	If $\tan \theta + \cot \theta = 2$ , t	hen the value of $\tan^2\theta$	$\theta + \cot^2 \theta$ is						
	$\frac{12}{\text{If } 7 \sin^2 \theta + 3 \cos^2 \theta} =$	2. 1	3 1	4.2					
109.	If $7 \sin^2 \theta + 3 \cos^2 \theta =$	= 4, then $\tan \theta$ is equal	to						
	1 1	$2\frac{1}{2}$	$2\frac{1}{2}$	4. $\frac{1}{4}$					
	$1.\frac{1}{\sqrt{3}}$	$\angle \cdot \frac{1}{\sqrt{2}}$	$3.\frac{1}{2}$	<b>+.</b> - 4					

110.	A card is drawn fr card drawn is neith			ards. What is	s the probability	that the				
	$\frac{1.\frac{11}{26}}{\text{The ratio of the volume}}$	2. $\frac{11}{13}$	3.	12	$4.\frac{11}{52}$					
111.	The ratio of the vois	lumes of a cub	e to that of the	sphere whic	h will fit inside	the cube				
	1.6 <b>:</b> π	2. 4 : $\pi$	3.	$5:\pi$	4.3 <b>:</b> <i>π</i>					
112.	$1.6:\pi$ $2.4:\pi$ $3.5:\pi$ $4.3:\pi$ 2.The marks attained by 40 students in a short assessment is given below where b are missing. If the mean of the distribution is 7.2, then the values a respectively are									
	Marks	5	6	7	8	9				
	No. of students	6	а	16	13	b				
	1. 2. 3	2.1.6	3.2	2. 5	4. 1. 4					
113.	1. 2, 3A cylinder of radiuThe radius of the s			elted and con	nverted into a sp	here.				
	1. 3 cm 2.4	cm 3.6	6 cm 4. 8	8 cm						
114.	1. 3 cm2.4The shadow of a to Sun's elevation is					when the				
	1. $25\sqrt{3}$ m	2. 20 m	3. 2	$20\sqrt{3}$ m	4. 25 m					
115.	1. $25\sqrt{3}$ m2. 20 m3. $20\sqrt{3}$ m4. 25 mFind the value of k for which the roots of the equation $3x^2 - 10x + k = 0$ are									
	reciprocal of each	other.								
110	1.2	2.3	<u> </u>	L	4. – 1					
116.	1.2     2.3     3.1     41       Consider the following frequency distribution:									
	Class $0-5$	5 6-11	12 – 17	18 - 23	24 - 29					
	Class0-5Frequency13	10	15	8	11					
	The upper limit of the median class is									
	1.17	2.17.5		3.18	4.	18.5				
117.	1. 17         2. 17.5         3. 18         4. 18.5           Which term of the A.P. 3, 15, 27, 39, will be 120 more than its 21 <sup>st</sup> term ?									
	1. 28thA circular brooch	2. 29 <sup>th</sup>	3. 3	30 <sup>th</sup>	4. 31 <sup>st</sup>					
118.	A circular brooch forming sectors of									
	1. 396 mm	2. 285 mm	3.	325 mm	4. 258 mi	n				
119.	If the sum of the rois:	oots of an equat	tion is 6 and or	ne root is 3–	$\sqrt{5}$ , then the eq	uation				
	1. $2x^2 - 4x + 3 =$	= 0	2 1	$x^2 - 4x + 4$	= 0					
	$3.3x^2 - 5x + 2 =$									
120.	The value of $x$ for	the quadratic e	equation $\sqrt{6x+1}$	-7 - (2x - 7)	=0 is					
	1.5	77	,	3 6	4.3					
	1. J	2.7		3. 6	4. J					

SECTION-SOCIAL STUDIES				
121.	Which of the following statements is true?			
	<ol> <li>A legitimate government is one where citizens, through participation, acquire a stake in the system.</li> <li>Prudential reasons stress that power-sharing will bring out better outcomes; moral reasons emphasise the very act of power sharing as valuable.</li> <li>A democratic rule involves sharing power with those affected by its exercise and who have to live with its effects.</li> <li>All of the above.</li> </ol>			
122.	is a violent conflict between opposing groups within a country that			
	becomes so intense that it appears like a war.			
	1 Civil war 2 Prove war 2 Colonial war 4 None of the shows			
123.	1. Civil war2. Proxy war3. Colonial war4. None of the aboveWhich of these statements about the service sector in India is INCORRECT?			
123.				
	<ul> <li>(a) Service sector in India employs many different kinds of people.</li> <li>(b) The service sector has become the most important in terms of Employment.</li> <li>(c) As economies grow, first the service sector grows, followed by the primary and secondary sectors, respectively.</li> <li>(d) Many workers in the country are working in the primary sector, producing only about one-sixth of the GDP.</li> </ul>			
124.	1. a, b, d 2. b, c & d 3. a & d 4. b & c			
124.	<ul><li>Which one of the following is an example of a Cultivable Wasteland?</li><li>1. Gross cropped area 2. Uncultivable land 3. Barren wasteland 4. Current fallow land</li></ul>			
125.	Identify the soil with the help of clues given below: –			
	<ul> <li>develops in areas with high temperatures and heavy rainfall</li> <li>is low in humus content</li> <li>found in the hilly areas of Karnataka, Kerala and Tamil Nadu</li> <li>1. Forest soil 2. Yellow soil 3. Black soil 4. Laterite soil</li> </ul>			
126.	Choose the non-market economic activities from the options given below: -			
	<ul> <li>(a) Vilas sells fish in the village market</li> <li>(b) Vilas cooks' food for his family</li> <li>(c) Sakal works in a private firm</li> <li>(d) Sakal looks after his younger brother and sister</li> <li>1. (a) &amp; (b) 2. (c) &amp; (d) 3. (a) &amp; (c) 4. (b) &amp; (d)</li> </ul>			

127.	In the Upper and Mi developed, viz, Khad	ddle Ganga plains, two different types of alluvial soils have ar and Bhangar
	uevelopeu, viz, Kliau	ai anu bhangai.
	Consider the following	g statements about these soil types and choose the correct ones.
	B. Khadar soil contain	alluvium while Bhangar represents a system of older alluvium. as calcareous concretions while Bhangar soil completely lacks it. a this soil decreases from west to east.
	1 A B and C 2 A	and B 3. B and C 4. A and C
128.		of people who come together to contest elections and hold
	power in the governme	
	1 D	alitical manter 2. Laternationers A. Dersin and Jakker
129.		olitical party 3. Interest group 4. Business lobby owing type of resource is iron ore?
129.		owing type of resource is non-ore:
	1. Renewable 2. Biot	ic 3. Flow 4. Non-renewable
130.	Consider the following	ng statements: -
		r Article 118 (3) of the Constitution makes rules to regulate the Sitting of the two houses of Parliament.
	1	ch a joint session may be adjourned is determined by the
	President.	
	-	stitute a joint session shall be one-tenth of the total numbers of
	members of both hous	es of Parliament.
	How many of the above	ve statements are true?
131.		ly two. 3. All three 4. None ose project built on Chenab River in Jammu and Kashmir.
151.		ose project built on Chenad River in Janninu and Kashinir.
	1. Bhakra Nangal 2.	Tehri Project 3. Sardar Sarovar 4. Salal Project
132.	The retreating monse	oon withdraws itself from
	1. The West Coast to t	he East Coast 2. North-East India to the West Coast
122		the 4. North-West India to Bengal and then to Kerala
133.	Choose the INCORR	ECT pair from the following
	Place	Leader
	1. Delhi	Bahadur Shah Zafar
	2. Kanpur	Peshwa Baji Rao I
	3.Lucknow4.Jhansi	Begum Hazrat Mahal Rani Laxmi Bai
134.		parties is directly linked to the emergence of
1.57.	The rise of pointed p	and the is uncerty mined to the emergence of
	-	ies 2. Direct democracies 3. Representative democracies
	4. Constitutional demo	ocracies.

135.	Consider the following statements and see which all are true: -
	A. The President of India is a part of the Parliament of India.
	B. The President of India is not a member of either of the houses of Parliament.
	C. The President of India relinquishes the membership of any house of which he/she
	was member before taking over as President.
	D. The President is not part of the Parliament.
	1 All of the shows 2 Only A & $P$ 2 Only A $P$ & $C$ 4 Only A $P$ & $D$
136.	1. All of the above2. Only A & B3. Only A, B & C.4. Only A, B & D.Which one of the following is a major benefit of a joint production between a
150.	local company and a Multi-National Company?
	iocar company and a mani-matonar company.
	1. MNC can bring the latest technology in the production. 2. MNC can control the
	increase in the price. 3. MNC can buy the local company. 4. MNC can sell the
	products under their brand name.
137.	National Manufacturing Competitiveness Council (NMCC) has been set up to
	1. Make use of the advantages offered by the urban centres known as agglomeration
	economies.
	2. To enhance productivity and improve the rate of growth in the manufacturing
	industry.
	3. Providing employment in all sectors of the economy
138.	<ul><li>4. Industrially develop rural centres surrounded by a huge agricultural rural hinterland.</li><li>A man is employed on a food processing farm where he has to do a lot of manual</li></ul>
136.	work. His wife and daughter also help him in his work on the farm every day.
	Which type of employment is this an example?
	when type of employment is this an example.
	1. Under employment 2. Seasonal employment 3. Over employment
	4. Cyclical employment
139.	Which of the following statements is TRUE for Gross Domestic Product?
	1. It is the value of all goods and services produced in the country.
	2. It is the value of all goods and services produced by the residents of the country.
	3. It is the value of final goods and services produced by residents of a country.
	4. It is the value of final goods and services produced in the country.
140.	Which of the following statements are true about political parties?
	1. The proportion of those who said they were members of some political party was
	lower in India than in many advanced countries like Canada and Japan.
	2. Over the last three decades, the proportion of those who report to be members of
	political parties in India has gone down steadily.
	3. The proportion of those who say they feel 'close to a political party' has also gone
	down in India. 4. None of the above.
141.	4. None of the above. Who amongst the following cannot chair the joint session of Parliament: -
141.	who amongst the following cannot chair the joint session of Farnament: -
	1. The Deputy Chairperson of the Rajya Sabha.
	2. The Deputy speaker of the Lok Sabha.
	3. The Vice President of India.
	4. Any MP of either house who is present in Parliament on the day of the joint session.

142.	Which of the following statements are true of the 104 Constitutional Amendment Act 2019: -
	A. Nominating members of Anglo-Indian community by the President was abolished
	B. Time limit for reservations of SCs & STs in Lok Sabha & State Legislative
	Assemblies was extended indefinitely. C. The Bill sought to amend Article 224 of the Constitution.
	D. It came into effect on 26 Jan 2020.
	1. All the above 2. A, B & C 3. A, C & D 4. A, B & D.
143.	A party that secures at least six per cent of the total votes in Lok Sabha elections
	or Assembly elections in four states and wins at least in the Lok
	Sabha is recognized as a national party.
	1. One seat 2. Two seats 3. Three seats 4. Four seats
144.	The Union Territory of Puducherry comprises of parts.
	1. Four 2. Three 3. Two 4. One
145.	The State Animal of Punjab is
	1. Horse 2. Sambar Deer 3. Black Buck 4. Spotted Deer
146.	is the first state in India which has made rooftop rainwater harvesting
	structures compulsory for all houses across the state.
1.47	1. Karnataka 2. Tamil Nadu 3. Maharashtra 4. Andhra Pradesh
147.	Koyna Dam is one of the largest dams located in
	1. Uttar Pradesh 2. Himachal Pradesh 3. Rajasthan 4. Maharashtra
148.	In 1987, a movement called Kittiko-Hachchiko (meaning pluck and plant) started
	a non-violent protest, where people plucked the eucalyptus plants and planted
	saplings of trees that were useful to them. This movement took place in the state
	of
1.40	1. Maharashtra 2. Andhra Pradesh 3. Karnataka 4. Gujarat
149.	The RTI Act of is a landmark legislation passed by our Parliament. Under this Act, citizens can seek information from Government offices pertaining
	to different activities.
	1. 2001 2. 2005 3. 2007 4. 2000
150.	Which of the following country is an example of a multi-party system?
	1. India 2. New Zealand 3. Canada 4. All of them

# END OF PAPER