CAT - 5

INSTRUCTIONS FOR THE TEST

- The total time for the test is 120 minutes.
 This test is divided into three parts totally comprising 126 questions. The marks for the questions are highlighted separately for each section.
- 3. You may work on any part of the test at any time during the test.
 4. For each question, four suggested answers are given of which only one is correct. There are four circles against each question number in the answer sheet. Each circle is designated as 1, 2, 3, 4 corresponding to your answer choices. Mark your response to each question by darkening the circle completely.
- 5. The last part of this test booklet comprises a sample bubble sheet. It is suggested that you answer all questions by shading the relevant oval in the bubble sheet.
- 6. Confine all rough work to whatever blank space is available in this test booklet. No additional paper may be used.

- Using a HB pencil only. Use of calculators, scales and other measuring instruments is not permitted.
 You will be required to demonstrate adequate competence on each of the three parts.
 Wrong answers carry negative marks. The negative marking scheme is 1/3 of the marks allotted to the question. Hence desist from guessing wildly.

Section 1 Questions 35

1.	The number of 5 digit positive integers such that in each of them every digit is greater than the digit to its right? (1mark)					
	1] ${}^{10}C_4 \times {}^{9}C_1$	2] ¹⁰ C ₅	3] ${}^{10}C_4 \times {}^{9}C_4$	4] $^{10}C_5 \times 5!$		
2.		Two strips of the same width 1m overlap at an angle of θ as shown. The area of the overlap (shown shaded) (in m²) is (2marks)				
		1				
	1] sin θ	2] <u>1</u> sin θ	$3]\frac{1}{1-\cos\theta}$	$4]\frac{1}{(1-\cos\theta)^2}$		
	Directions for Questions 3 to 6: Answer the questions on the basis of the information given below.					
	that N_0 = the number of N_1 = the number of And so on.	f times 0 occurs in the lis f times 1 occurs in the lis		nbers with the property		
3.	The N_0 is(1mark)				
	1] 0	2] 1	3] 2	4] 4		
4.	How many of N ₄ , N	$_{5}$, N_{6} and N_{7} can be non-:	zero? (1mark)			
	1] 0	2] 1	3] 2	4] 3		
5.	How many times do	es 1 occur? (1mark)				
	1] 0	2] 1	3] 2	4] 3		
6.	Which of the follow (i) $N_2 = N_4$	ring statements can be tru (ii) N_0 :				

(iv) $N_3 = N_5 = N_6 = N_7$ 2] 2 and 4 only 4] 2 and 3 only.

(iii) $N_3 = N_4 = N_5 = N_6$ 1] 1 and 3 only 3] 1 and 4 only

7.	For all positive integers n, let $f(n) = log_{2002} n$ Let $N = f(11) + f(13) + f(14)$. Which of the following relations is true.? (1mark)				
	1] N = 1	2]1 < N < 2	3] N = 2	4] N > 2	
8.	If $\log_N M = \log_M N$, M 7	4 N, M, N \neq 1, M N > 0, the	n MN =? (2mar	ks)	
	1] $\frac{1}{2}$	2]1	3]2	4] 10	
9.	In a factory, there are three shifts of work on a day comprising eight hours each. During the three shifts, the average work efficiency of workers is 80%, 70% and 50% respectively. A work is completed in 60 days by working in first shift only. If the work is done during all the three shifts, then how many less days are required to complete the work? (1mark)				
	1] 24	2] 36	3] 45	4] 15	
10.	For all integers n greater t $c = a_{10} + a_{11} + a_{12} + a_{13} + a_{13} + a_{14} + a_{15} + a_{1$	han 1, define $a_n = \frac{1}{n}$ a_{14} . Then b – c equals (2m	. Let $b = a_2 + a_3 + a_4 + a_5$ arks)	a_5 and a_5 log 2002	
	1] 2	2]	oj 1	2	
11.	The sides of a rhombus and a square are 5cm. But the area of the square is twice that of the area of the rhombus. What is the ratio of the short diagonal to the long diagonal of the rhombus? (2marks)				
	1] 0.27	2] 1.27	3] 2.27	4] 3.27	
12.	If a two digit number is true? (1mark)	8 times the sum of its dig	its then which of the follow	ving statements is	
	2] The number formed by3] The number formed by	y reversing the digits is twic y reversing the digits is half y reversing the digits is thric y reversing the digits is one	the sum of its digits. the the sum of its digits.		
13.	Solomon has a certain a	mount of money with him	. If he distributes it equal	y among 10 charity	

organisations, he has 9 thousands left. If he distributes among 9 charity organisations, he has 8 thousands left. If he distributes among 8 charity organisations he has 7 thousands left and if he distributes among 7 charity organisations he has 6 thousands left. Which of the following could be

3] Rs.30, 240, 000

4] none of these

the amount he has with him? (2marks)

2] Rs.2, 039,000

1] Rs.5, 039,000

Directions for Questions 7 –20: Answer the questions independently of each other.

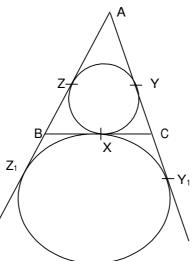
	1] 7/3	2] 15/16	3] 9/32	4] 32/7
15.	work and works at the e	efficiency of Amit and leav	20 days respectively. Sric res after four days. Amit v ratio should Sridhar, Amit	vorks with Hari and
	1] 2:3:3	2] 1:3:1	3] 2:3:10	4] 1:3:2
16.	km away. The first car a After traveling for some	and the second car travel a time, the speeds of the two	me towards the same desti t respective speeds of 60 k cars get interchanged. Fir irst. Find the time after w	kmph and 90 kmph. nally, the second car
	1] 2 hours	2] 4 hours	3] 3 hours	4] 5 hours
17.	How many 5-digit number and using only the digits graph 1] 12		possible involving the digits	6 6, 3, 0, 4 and 6 4] 24
18.	Let C, A, T be distinct p possible value of the sum		he product C.A.T. = 2002.	Then the largest
	1] 1004	2] 1003	3] 2004	4] 2003
19.		ee students are awarded the	ation, which is marked ou e same mark. What is the i	
	1] 29	2] 30	3] 39	4] 40
a + ³ a - an integ	—1 ger, then ($ \sqrt{\frac{1/3}{+ a}} $	$-\frac{3}{9}$ a $-\frac{1}{3}$ = (1 mark)20.	If 0 < a < 2 and a is
	1] 1	2] 2	3] 0	4] –1
	information given below: In National Public schoo	I, out of every five pupils ng at least one of these	e questions on the basis learning Marathi, two learr languages there are three	Hindi as well; and
21.	What percent of the studer	nts learn Marathi? (2marks)		
	1] 6	2] 10	3] 15	4] indeterminate

14. If $a^2 = b^4 = c^8 = d^{16}$, then $log_d^2 (abc)^{1/3} = (1mark)$

22.	What percent of the students learn neither of the languages? (1mark)				
	1] 75	2] 71	3] 66	4] indeterminate	
	Directions for questions	23 to 25: Answer th	ne questions independent of	each other.	
23.	f is a real function such (2marks)	that $f(x + y) = f($	(xy) and f $\begin{bmatrix} 2 \\ 2 \end{bmatrix}$ = $\begin{bmatrix} 2 \\ 3 \end{bmatrix}$ for	or all x, y. Then f(3001) is	
	1] 3001	$2] - \frac{3001}{3}$	3] 3001 3	4] - 2 3	
24.	another train of length 3 crossing the first train. crossed the first train. If	00 m coming in t The second train the length of the p	he opposite direction with entered the platform com	completely left the platform, a speed of 75 kmph starts apletely, and simultaneously en what is the time taken by 2marks)	
	1] 48 seconds	2] 54 seconds	3] 60 seconds	4] 72 seconds	
25.	If $\frac{\sqrt{x+1}}{\sqrt{x+1}} = 5$ the second of th	nen what is the valu $2] \frac{13}{5}$	e of x? (1mark) $3] \frac{9}{4}$	4] 13	
	•	5	4	4] 4	
	Directions for questions 26 and 27: Answer the questions on the basis of the following information given below:				
	Arun started and stopped found that the hands of the		en 3pm and 4pm and 5pm d their places.	and 6pm respectively. He	
26.	Approximately how long v	vas the test? (1mar	k)		
	1] 1 hr 46 min	2] 1 hr 49 min	3] 1 hr 51 min	4] 1 hr 55 min	
27.	When did he start the test?	(2marks)			
	1] $20 \frac{26}{143}$ min past 3pm 3] $29 \frac{62}{143}$ min past 3 pm		2] 26 $\frac{62}{143}$ min past 3 pm 4] 17 $\frac{29}{143}$ min past 3 pm.		

Directions for questions 28 to 30: Answer the questions on the basis of the following information given below:

In the figure given below, AB = c cm, BC = a cm, AC = b cm and s is defined as the semi perimeter of \triangle ABC.



Answer the following questions in terms of a, b, c and s.

28. What is the length AZ equal to? (2marks)

3]
$$s - c$$

29. What is the length AZ₁ equal to ? (1mark)

$$1]s + a$$

$$2] s + b$$

$$3] s + c$$

30. What is the length BX equal to ? (1mark)

$$3] s - c$$

Directions for questions 31 - 33: Answer the questions on the basis of the following information given below.

In a bicycle race of 1040 meters, Varun gave Smaran 120 meters start but lost by 5 sec. If he had given Smaran a 5 seconds start he would have won by 40 meters.

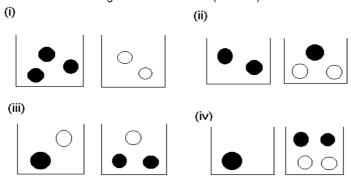
- 31. How long does Varun take to ride the distance? (2marks)
 - 1] 1min 30sec
- 2] 1min 40sec
- 3] 1min 50sec
- 4] 2 minutes

- 32. How long does Smaran take to ride the distance? (1mark)
 - 1] 2min 10sec
- 2] 2min
- 3] 1min 50sec
- 4] 1min 40sec

- 33. If they had started together then which of the following statements is true? (1mark)
 - 1] Smaran would have won by 10 sec
 - 2] It would have been a dead heat.
 - 3] Varun would have won by 10 sec
 - 4] Varun would have won by 1 sec.

Directions for questions 34 and 35: Answer the questions independent of each other.

34. The different possibility of distributing 3 black and 2 white balls in 2 baskets are shown below which of the following statements is true? (2marks)



- 1] iv has maximum probability of picking a black ball
- 2] ii has maximum probability of picking a white ball
- 3] iii has minimum probability of picking a white ball
- 4] i has maximum probability of picking a black ball.
- 35. OCDE is a rectangle inscribed in a quadrant of a circle of radius 10cm. If OE = 2 5√, then what is the area of the rectangle? (1mark)
 - 1] 20cm²
- 2] 20 $\sqrt{2}$ cm²
- 3] 40cm²
- 4] 40 $\sqrt{2}$ cm²

Section 2 Questions 41

Directions for questions 36 to 39: Mr. Rich, a fund manager, is analyzing performance of shares of three companies X, Y and Z in three situations: Recession, Normal growth and Boom. Probabilities of occurrence of these situations are 0.25, 0.625 and 0.125 respectively. Shares can be purchased only at issue price and sold after receiving the dividend (on their face value) at their ending price.

Company	Situation	Expected Dividend rate	Expected Ending price	Expected Issue Price
Company X	Recession	2.5	65	100
	Normal growth	10	210	175
	Boom	7.5	160	120
Company Y	Recession	0	5	65
	Normal growth	10	145	260
	Boom	18	350	130
Company Z	Recession	0	20	80
	Normal growth	10	175	145
	Boom	3	145	100

Note: FV of all shares is Rs. 100.

Net return per share of a company = Σ [Probability × (Dividend \pm Profit/Loss on sale)], i.e. sum of

		Profit/Loss on sale) for each returns under specifically st		,-
36.	What is the net return per	share of Company Z? (2ma	rks)	
	1] Rs. 48, gain	2] Rs. 16, gain	3] Rs. 4.5, Loss	4] Rs. 4.5, gain
37.	7. For which company is the net return per share the highest? (2marks)			
	1] X	2] Y	3] Z	4] Y or Z
38.			y Boom and Mr. Rich invest minimum overall return? (2	
	1] Rs. 12.5, profit	2] Rs. 117.5, loss	3] Rs. 201.25, profit	4]Rs. 255, profit
39	In the above scenario if I	Mr Rich invests Rs 65000	0 each time in buying share	s of Y Company

then what would be his overall return? (2marks)

1] Rs. 205000, loss 2] Rs. 395000 gain 3] Rs. 507000 gain 4] Rs. 322500 loss

Directions for questions 40 to 43: The following is a summary of financial data (in million \$) of Company XYZ. The company's financial year is from 1st April to 31st March. A quarter refers to 3 months.

	Quarte	r Ended	Nine Mon	ths Ended	Year	ended
Particulars	31/3/03	31/3/04	31/3/03	31/3/04	31/3/03	31/3/04
Assets	540	670	1615	1935	2065	2535
External debt	290	350	925	1000	1175	1305
Turnover	280	370	811	1085	1026	1380
Profit	45	54	75	160	40	195

Note: Proprietor's fund = Assets - External	debt
Cost = Turnover – Profit	

40.	What is the Asset: Turnov	ver ratio for the first quarter	of 2002-2003? (2marks)	
	1] 36:13	2] 27:14	3] 90:43	4] Indeterminate

41. By what % have the profits increased from first quarter of 2002-03 to last quarter of 2003-04? (2marks)

1] 54% 2] 254% 3] 200% 4] Indeterminate / None of these

42. Calculate % increase /decrease in debt turnover ratio for first quarter of 2002-03 to last quarter of 2003-04. (2marks)

1] 18% 2] 83% 3] 43% 4] Indeterminate / None of these

43. Express increase/ decrease in external debt from the end of first quarter to end of last quarter of 2002-03 as a % of increase or decrease in external debt of 2003-04. (2marks)

1] 30.77% 2] 88.88% 3] 43.53% 4] Indeterminate / None of these

Directions for questions 44 to 47: CAT 2003 had 3 sections – I, II and III, each comprising 50 questions. The following table gives the performance of 200 students who have taken the test. Correct questions have 1 mark and incorrect or unanswered questions carry no marks.

	Section 1		1 Section 2		Section 3	
Range of Marks	% Students	Accuracy Percentage	% Students	Accuracy Percentage	% Students	Accuracy Percentage
0-10	10%	30%	5%	10%	20%	25%
0-20	20%	35%	40%	20%	60%	30%
0-30	40%	40%	70%	30%	85%	40%
0-40	70%	45%	90%	50%	95%	50%
0-50	100%	50%	100%	40%	100%	40%

While percentage students indicate percentage of students who have scored in the particular range, accuracy percentage indicates the average accuracy percentage of the students in that range.

	. ,		(/	
	1] 80	2] 160	3] 70	4] 140
45.	How many students score	ed less than 10 in all three se	ections? (1mark)	
	1] 10	2] 20	3] 5	4] Indeterminate

- 46. Which of the following statement is necessarily true? (1mark)
 - 1] Accuracy is higher for people who score higher in all sections.

How many students scored over 20 marks in section 1? (1mark)

- 2] Accuracy first increases and then decreases as scores increase.
- 3] 5% of the students have scored over 120.
- 4] None of these.

44.

- 47. Which of the following statement is necessarily true? (1mark)
 - 1] Overall average score in section 1 is lower when compared to section 2.
 - 2] Overall average score in section 2 is lower when compared to section 3.
 - 3 Both 1 and 2
 - 4] Neither 1 nor 2

Directions for question 48 to 50: A question is followed by two statements labeled A and B. Mark 1 if statement B alone is sufficient to answer the question. Mark 2 if both statements A and B are also not sufficient to answer the question.

Mark 3 if either statement alone is sufficient to answer the question or both statements together are required to answer the question.

Mark 4 if statement A alone is sufficient to answer the question.

48.	and Earth is 3 mi	What is the distance from Mars to Earth? (1mark) A. Mars is 4 million light years from Sun and Earth is 3 million light years away from Sun. B. Light travels at a speed of 300,000 k.m.				
	per second.	01.0	01.4	47.4		
	1] 2	2] 3	3] 1	4] 4		

49.	Who is the youngest between Ajay, Binoy and Sum of Ajay's and Binoy's age is more than 3 Sum of Chari's and Binoy's age is more than 3 1] 1 2] 2		3 times Chari's age. B.	4] 3					
50.	Did the sensex rise or fa A. Of the 30 shares tha B. The weightage of t weightage of those that	t represent the sensex, he 10 scripts that fell	20 rose and 10 fell. is an AP with integral v	ralue as difference, and	the				
	1] 1	2] 2	3] 3	4] 4					
	and though it gave a	Directions for questions 51 to 55: In a recent NRS survey, the computer's software had problem, and though it gave accurate output, data for individual newspapers readership was unavailable. The table shows the output generated by the three computers for 3 metros. All figures are in thousands.							
		Delhi	Bangalore	Mumbai					
	ToI + IE	1900	1280	2300					
	ToI + Midday	1650	1200	2985					
	ToI + HT	3000	1200	2200					
	ToI + Deccan	1650	2150	2150					
	Deccan + Hindu	415	1635	415					
	Hindu + Midday	415	685	1250					
51.	sell in Bangalore. There	e are no other newspap	pai, Deccan only in Banga pers in the three cities.		not				
	1] Tol	2] Hindu	3] HT	4] None of th	nese				
52.	What is the difference (in '000) between ToI and the least selling newspaper in the three metros put together ? (1mark)								
	1] 4520	2] 3750	3] 2250	4] None of these					
53.	What is the total number of newspapers sold in Delhi (in '000) ? (1mark)								
	1] 3665	2] 3750	3] 3825	4] None of the	nese				
54.	Bangalore ToI circulati	Bangalore ToI circulation exceeds Mumbai IE circulation by thousands. (1mark)							
	1] 1050	2] 950	3] 850 4] None of		nese				
55.	Approximately how ma (1mark)	any thousands of news	spapers are sold in all the	three metros put togethe	r ?				
	1] 10180	2] 8500	3] 12250	4] 11500					

Directions for questions 56 to 59: Four companies visit IIM - Z for recruiting its 300 students and each have different recruitment processes. However, a test and an interview are common to all 4 companies. The following table indicates the number of students who attended each stage. The difference in numbers indicates those who could not clear the stage. Some companies also had the basic criteria of aggregate marks in academics. A "-" represents that the stage was not a part of the process.

Company	Stages>>						
	Basic Criteria	Test	Interview	Psychometric Test	Final Selection		
Α	300	300	80	25	-	10	
В	250	140	40	25	-	5	
С	-	240	-	35	25	10	
D	180	150	40	20	18	15	

56.	Percentage of students selected as a proportion of those who appeared for the test is the lowest for (1mark)						
	1] A	2] B	3] C	4] D			
57.	If no student was selected for interview by two companies, then what is the minimum number of individual students who qualified for GDs of the three companies that conducted GDs ? (1mark)						
	1] 80	2] 70	3] 105	4] 120			
58.	Filtration level is the percentage of students who are selected for the next round, compared to the previous round. At what stage did most students of IIM-Z get filtered out ? (1mark)						
	1] Test	2] GD	3] Psychometric Test	4] Interview			
59.	What is the maximum number of students who may not have got a job offer from the above 4 companies of $IIM-Z$? (1mark)						
1] 285 2] 260 3] 290 4] 275							

DIRECTIONS for questions 60 to 65: Refer to the data below.

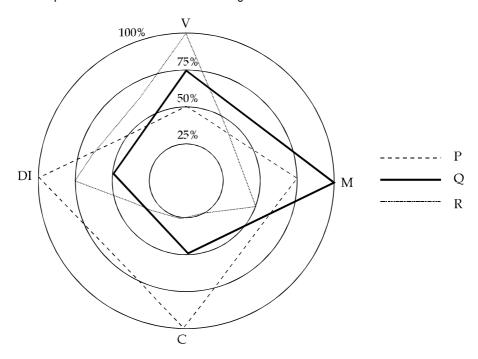
5 movies of 4 directors (Speel-burg, JackyeeChain, Olee-ver, and Shyaam-aila) figured in the O'scar Awards. Among them, these movies had 15 nominations. Each director secured atleast one nomination. From these movies, there were 2 nominations for the best actress, 3 for the best lyricist, and 3 for the best script. The director of the movie which got the best lyricist award was nominated for the best direction in two movies. Another movie had nominations for the best lyricist, best music, best script, and best actor.

Speel-burg's movie had 3 nominations. Shyaam-aila got nominated for the best direction in the only movie he had directed. His movie also figures in the best script and the best music award. JackyeeChain was nominated as the best director for the movie whose actor, actress were nominated for the best actor and the best actress award respectively.

60.	Which of the fo	llowing is/are necessarily true ?	? (1mark)					
	a) Olee-ver was	a) Olee-ver was nominated for the best direction. b) The						
	best musician w	best musician was from JackyeeChain's movie. c)						
	Shyaam-aila's movie bagged 3 nominations.							
	d) Speel-burg's movie was nominated for the best actor.							
	1] a	2] b and c	3] c	4] c and d				

61.	Whose movie was nominated for maximum awards? (1mark)								
	1] Olee-ver's	2] JackyeeChain's	3] Shyaam-aila's	4] Speel-burg's					
62.	How many nominations (from these 5 movies) were there for the best director ? (1mark)								
	1] 2	2] 3	3] 4	4] 5					
63.	How many nominations did JackyeeChain's movie/s have ? (1mark)								
	1] 2	2] 3	3] 4	4] 5					
64.	Whose movie got the bes	Whose movie got the best lyricist award ? (1mark)							
	1] JackyeeChain's	2] Olee-ver's	3] Shyaam-aila's	4] Speel-burg's					
65.	How many nominations together? (1mark)	were there for the best	actor, the best music, and	the best lyricist					
	1] 5	2] 8	3] 7	4] 6					
	pipe can carry between the	(2, 2) (3, 3) (5, 4) (5, 4)	E (1, 3) (3, 2) (1, 3) (5, 5) (5, 2) (5, 7)	> H					
66.	What is the minimum cos	t of transporting 2 litres fror	m A to H in 1 day ? (2marks	s)					
	1] Rs.10	2] Rs.12	3] Rs.20	4] Rs.24					
67.	What is the maximum an routes ? (2marks)	nount of liquid that can be can	arried from A to H in 2 days	s from all possible					
	1] 9 litres	2] 18 litres	3] 12 litres	4] 14 litres					
68.	What is the minimum cost of carrying 4 litres from A to H in 1 day ? (2marks)								
	1] Rs.46	2] Rs.40	3] Rs.42	4] Rs.48					

Directions for questions 69 to 72: Refer to the diagram below.



The above diagram represents the percentage marks scored by 3 students P, Q, and R. V = Verbal Ability, M = Maths, DI = Data Interpretation, C = Comprehension Assume all the three subjects have the same maximum marks. For eg. Q has scored 100% in Math.

69. What is the ratio of marks of P to Q in subject C? (1mark) 1] 4 2] 2 3] 3 4] Indeterminate 70. How many marks does R need to catch up with P in comprehension (C) ? (1mark) 1] 76 2] Indeterminate 3] 50 4] 25 71. If to gain 5%, 16 minutes of study is needed, how many hours does R need to put in to catch up with Q in M? (1mark) 1] 2 hrs 10 mins 2] 2 hrs 30 mins 3] 2 hrs 40 mins 4] Indeterminate 72. Who is the highest scorer in English (V + C)? (1mark)1] Q 2] R 3] P 4] Indeterminate

Questions 73-76 are based on the following data:

Five students wrote an examination. After they received their marks (all different), they realised the following facts :

- 1] All obtained marks which were multiples of 10.
- 2] Only 1 student had secured less than the minimum passing score of 40.
- 3] Mohan obtained two-thirds the marks of the student who got 60.
- 4] The student who obtained more marks than Krish and less than Vivek, also obtained three and a half times the marks that Raj obtained.
- 5] Jay's score is the average of Krish and Vivek

73.	Vivek obtained (0.5mark)						
	1]50 marks	2]60 marks	3]80 marks	4]55 marks			
74.	The combined score of Ra	j, Krish and Jay is (0.5mark	ς)				
	1]150 marks	2]160 marks	3]190 marks	4]100 marks			
75.	The mean score of all the	five students is (0.5mark)					
	1]50	2]44	3]54	4]52			
76.	The median scorer was (0.	5mark)					
	1]Krish	2]Jay	3]Raj	4]Vivek			

Section 3 Questions 50

Directions for questions 77 to 100: Read the passages and answer the questions that follow:

Passage 1 (1mark questions)

If it was Max Weber who first defined bureaucracy and predicted its triumph, Warren Bennis may go down in sociological textbooks as the man who first convincingly predicted its demise and sketched the outlines of the organizations that are springing up to replace it. At precisely the moment when the outcry against bureaucracy was reaching its peak of shrillness on American campuses and elsewhere, Bennis, a social psychologist and professor of industrial management, predicted flatly that "in the next twenty – five to fifty years: we will all "participate in the end of bureaucracy." He urged us to begin looking "beyond bureaucracy."

Thus Bennis argues that "while various proponents of 'good human relations' have been fighting bureaucracy on humanistic grounds and for Christian values, bureaucracy seems most likely to founder on its inability to adapt to rapid change.....

"Bureaucracy," he says, "thrives in a highly competitive undifferentiated and stable environment, such as the climate of its youth, the Industrial Revolution. A pyramidal structure of authority, with power concentrated in the hands of a few.....was, and is, an eminently suitable social arrangement for routinized tasks. However, the environment has changed in just those ways which make the mechanism most problematic. Stability has vanished."

Each age produces a form of organization appropriate to its own tempo. During the long epoch of agricultural civilization, societies were marked by low transience. Delays in communication and transportation slowed the rate at which information moved. The pace of individual life was comparatively slow. And organizations were seldom called upon to make what we would regard as high-speed decisions.

The age of industrialism brought a quickened tempo to both individual and organizational life. Indeed, it was precisely for this reason that bureaucratic forms were needed. For all that they seem lumbering and inefficient to us, they were, on the average, capable of making better decisions faster than the loose and ramshackle organizations that preceded them. With all the rules codified, with a set of fixed principles indicating how to deal with various work problems, the flow of decisions could be accelerated to keep up with the faster pace of life brought by industrialism.

Weber was keen enough to notice this, and he pointed out that "The extraordinary increase in the speed by which public announcements, as well as economic and political facts are transmitted exerts a steady and sharp pressure in the direction of speeding up the tempo of administrative reaction...." He was mistaken, however, when he said, "The optimum of such reaction time is normally attained only by a strictly bureaucratic organization." For it is now clear that the acceleration of change has reached so rapid a pace that even bureaucracy can no longer keep up. Information surges through society so rapidly, drastic changes in technology come so quickly that newer, even more instantly responsive forms of organization must characterize the future.

What, then, will be the characteristics of the organizations of super-industrial society? "The key word," says Bennis, "will be 'temporary'; there will be adaptive, rapidly changing temporary systems." Problems will be solved by tasks forces composed of "relative strangers who represent a set of diverse professional skills."

Executives and managers in this system will function as coordinators between the various transient work teams. They will be skilled in understanding the jargon of different groups of specialists, and they will communicate across groups, translating and interpreting the language of one into the

language of another. People in this system will, according to Bennis, "be differentiated not vertically, according to rank and role, but flexibly and functionally, according to skill and professional training."

Because of the high rate of movement back and forth from one transient team to another, he continues, "There will.....be a reduced commitment to work groups..... While skills in human interaction will become more important, due to the growing needs for collaboration in complex tasks, there will be a concomitant reduction in group cohesiveness..... People will have to learn to develop quick and intense relationships on the job, and learn to bear the loss of more enduring work relationships."

This then is a picture of the coming Ad-hocracy, the fast – moving, information – rich, kinetic organization of the future, filled with transient cells and extremely mobile individuals. From this sketch, moreover, it is possible to deduce some of the characteristics of the human beings who will populate these new organizations – and who, to some extent, are already to be found in the prototype organizations of today. What emerges is dramatically different from the stereotype of the organization man. For just as the acceleration of change and increased novelty in the environment demand a new form of organization, they demand, too, a new kind of man.

Three of the outstanding characteristics of bureaucracy were, as we have seen, permanence, hierarchy, and a division of labour. These characteristics molded the human beings who manned the organizations.

Permanence – the recognition that the link between man and organization would endure through time – brought with it a commitment to the organization. The longer the man stayed within its embrace, the more he saw his past as an investment in the organization, the more he saw his personal future as dependent upon that of the organization. Longevity bred loyalty. In work organizations, this natural tendency was powerfully reinforced by the knowledge that termination of one's links with the organization very often meant a loss of the means of economic survival. In a world wracked by scarcity of the many, a job was precious. The bureaucrat was thus immobile and deeply oriented toward economic security. To keep his job, he willingly subordinated his own interests and convictions to those of the organization.

Power-laden hierarchies, through which authority flowed, wielded the whip by which the individual was held in line. Knowing that his relationship with the organization would be relatively permanent (or at least hoping that it would be) the organization man looked within for approval. Rewards and punishments came down the hierarchy to the individual, so that the individual, habitually looking upward at the next rung of the hierarchical ladder, became conditioned to subservience. Thus: the wishy-washy organization man - the man without personal convictions (or without the courage to make them evident). It paid to conform.

Finally, the organization man needed to understand his place in the scheme of things; he occupied a well-defined niche, performed actions that were also well-defined by the rules of the organization, and he was judged by the precision with which he followed the book. Faced by relatively routine problems, he was encouraged to seek routine answers. Unorthodoxy, creativity, venturesomeness were discouraged, for they interfered with the predictability required by the organization of its component parts.

The embryonic Ad-hocracies of today demand a radically different constellation of human characteristics. In place of permanence, we find transience-high mobility between organizations, never-ending reorganizations within them, and a constant generation and decay of temporary work groupings. Not surprisingly, we witness a decline in old-fashioned "loyalty" to the organization and its sub-structures.

- 77. According to the author, Weber was incorrect in his evaluation of the bureaucratic organization because
 - 1] arguments of Bennis predicted the demise of bureaucracy.
 - 2] Weber underestimated the rate of change and information flow through a society.
 - 3] the author believed that all organizational forms are temporary.
 - 4] bureaucracy only thrives in transient environments.
- 78. According to Bennis.
 - 1] bureaucratic organizations would be obsolete as they lacked good human skills.
 - 2] a bottom-heavy organizational structure is unfit to manage any form of organization in competitive environments.
 - 3] the organizations of tomorrow would rely on specialized skill-sets of the members constituting the organization
 - 4] employees of non-bureaucratic organizations would be self-centred and find it difficult to work under trying conditions.
- 79. Which of the following is not true of the organizational man in a bureaucratic environment?
 - 1] He subordinated his own interests to those of the organization.
 - 2] He viewed his experience in the organization as in investment.
 - 3] He explored creative solution to a small set of problems related to his niche.
 - 4] Rewards came down the hierarchy to the organizational man.
- 80. According to the author, the organizations of today
 - i] require work-groups that are rapidly formed and demolished to resolve the task on hand. ii] are populated with people with high levels of energy and good at multi-tasking.
 - iii] would seek people who know their role in the scheme of things, and perform actions well defined by the organization
 - 1] i only
- 2] ii & iii
- 3] i & iii
- 4] i, ii and iii
- 81. According to the passage, the key differences between bureaucratic organizations and modern organizations is
 - i] in the nature of work performed by each ii] in the characteristics of the people that form the organization iii] in the manner in which problems will be approached and solved iv] in the rate at which information would flow through the organization.
 - 1] i & ii
- 2] i & iii
- 3] ii & iii
- 4] ii and iv

Passage 2 (2mark questions)

We still know too little about this phenomenon to explain authoritatively why over-stimulation seems to produce maladaptive behavior. Yet we pick up important clues if we recognize that over-stimulation can occur on at least three different levels: the sensory, the cognitive and the decisional.

The easiest to understand is the sensory level. Experiments in sensory deprivation, during which volunteers are cut off from normal stimulation of their senses, have shown that the absence of novel sensory stimuli can lead to bewilderment and impaired mental functioning. By the same token the input of too much disorganized, patternless or chaotic sensory stimuli can have similar effects. It is for this reason that practitioners of political or religious brainwashing make use not only of sensory deprivation (solitary confinement, for example) but of sensory bombardment involving flashing lights, rapidly shifting patterns of color, chaotic sound effects the whole arsenal of psychedelic kaleidoscope.

The religious fervor and bizarre behavior of certain hippie cultists may arise not merely from drug abuse, but from group experimentation with both sensory deprivation and bombardment. The chanting of monotonous mantras, the attempt to focus the individual's attention on interior, bodily

sensation to the exclusion of outside stimuli, are efforts to induce the weird and sometimes hallucinatory effects of under-stimulation.

A the other end of the scale, we note the glazed stares and numb, expressionless faces of youthful dancers at the great rock music auditoriums where light shows, split screen movies, high decibel screams, shouts and moans, grotesque customers and writhing, painted bodies create a sensory environment characterized by high input and extreme unpredictability and novelty.

An organism's ability to cope with sensory input is dependent upon its physiological structure. The nature of its sense organs and the speed with which impulses flow through its neural system set biological bounds on the quantity of sensory data it can accept. If we examine the speed of signal transmission within various organisms, we find that the lower the evolutionary level, the slower the movement. Thus, for example, in a sea urchin egg, lacking a nervous system as such, a signal moves along a membrane at a rate of about a centimeter an hour. Clearly, at such a rate, the organism can respond to only a very limited part of its environment. By the time we move up the ladder to a jellyfish, which already has a primitive nervous system, the signal travel 36,000 times faster: ten centimeters per second. In a worm, the rate leaps to 100 cps. Among insects and crustaceans, neural pulses race along at 1000 cps. Among anthropoids the rate reaches 10,000 cps, Crude as these figures no doubt are, they help explain why man is unquestionably among the most adaptable of creatures.

Yet even in man, with a neural transmission rate of about 30,000 cps, the boundaries of the system are imposing. (Electrical signals in a computer, by contrast, travel billions of times faster) the limitations of the sense organs and nervous system mean that many environmental events occur at rates too fast for us to follow, and we are reduced to sampling experience at best. When the signals reaching us are regular and repetitive, this sampling process can yield a fairly good mental representation of reality. But when it is highly disorganized, when it is novel and unpredictable, the accuracy of our imagery is necessarily reduced. Our image of reality is distorted. This may explain why, when we experience sensory over-stimulation, we suffer confusion, a blurring of the line between illusion and reality.

- 82. The author cites the example of dancers at the rock concert to
 - 1] demonstrate the effect of predictable environment on sense organs.
 - 2] contrast the effect of sensory stimuli on hippie cultists.
 - 3] show that both deprivation and over stimulation of sensory stimuli can lead to disorientation.
 - 4] show that the capacity to deal with sensory input varies with the physiological structure.
- 83. According to the author, man is among the most adaptable of creatures because i] he has a neural transmission rate of about 30000 cps ii] he has better defined sense organs. iii] the biological bounds of the quality of sensory data it can accept is high.

1] i only

2] i & iii

3] i & ii

4] i, ii & iii

Passage 3 (1mark questions)

January 6, 1990.

It wasn't until thirty years ago, in the 1960s, that there began to be any widespread realization that ecstasy is a legitimate human need — as essential for mental and physical health as proper nutrition, vitamins, rest, and recreation. Though the idea had been foreshadowed by Freud and stressed by Wilhelm Reich, there had never been anything particularly ecstatic about psychoanalysts, or their patients. They seemed, on the whole, emotionally catharticized and drearily mature. Ecstasy, in the form of mystical experience, had also been the objective of a growing minority that, since the beginning of the century, had been fascinated with yoga, Tibetan Buddhism, Zen, Vedanta, and other forms of Oriental meditation; and these people were always rather serious and demure.

But in the sixties, everything blew up. Something almost like a mutation broke out among people from fifteen to twenty-five, to the utter consternation of the adult world. From San Francisco to Katmandu, there suddenly appeared multitudes of hippies with hair, beards, and costumes that disquietingly reminded their elders of Jesus Christ, the prophets, and the apostles – who were all at a safe historical distance. At the peak of our technological affluence, these young people renounced the cherished values of Western Civilization – the values of property and status. Richness of experience, they maintained, was far more important than things and money, in pursuit of which their parents were miserably and dutifully trapped in squirrel cages.

Scandalously, hippies did not adopt the ascetic and celibate ways of traditional holy men. They took drugs, held sexual orgies and substituted free-loving communities for the hallowed family circle. Those who hoped that all this was just an adolescent quest for kicks that would soon fade away were increasingly alarmed, for it appeared to be in lively earnest. The hippies moved on from marijuana and LSD to Hindu chants and yoga, hardly aware that mysticism, in the form of realizing that one's true self is the Godhead, is something Western society would not tolerate. After all look what happened to Jesus. Mysticism, or democracy in the kingdom of God, seemed arrant subversion and blasphemy to people whose official image of God had always been monarchical - the cosmic counterpart of the Pharaohs and Cyruses of the ancient world. Mysticism was therefore persecuted alike by church and state, and the taboo still continued - with assistance from the psychiatric inquisition. Admittedly, the hippies were credulous, undiscriminating, and immoderate in their spiritual explorations. But if the approach was fumbling, the goal was clear. I have before me a faded copy of the summer 1969 bulletin of what was then California's revolutionary Mid peninsula Free University (now the world respected Castalia University of Menlo Park), which bluntly affirms that "The natural state of man is ecstatic wonder; we should not settle for less".

Looking back from 1990, all this is very understandable, however inept. The flower children knew what their parents hardly dared contemplate: that they had no future. At any moment, they might suffer instant cremation by the H-bomb or the slower and grislier dooms of chemical and biological warfare. The history of man's behaviour warned them that armaments which exist are almost invariably used and may even go off by themselves. By the end of 1970, their protests against the power structure of the West (which from their standpoint included Russia), combined with the Black-Power movement, had so infuriated the military industrial police labor union-Mafia complex known as the 'establishment' that the United States was close to civil war.

Happily, it was just then that the leading scientists, philosophers, and responsible statesmen of the world abruptly called factionists and politicians to their senses. They solemnly proclaimed an ecological crisis and put it so bluntly that the world almost went into panic. Ideological, national, and racial disputes were children's tiffs in comparison with the many headed menace of overpopulation, totally inadequate food production, shortage of water, erosion of soil, pollution of air and water, deforestation, poisoned food, and utter chemicals imbalance of nature. By 1974, no one could refuse to see that all extravagant military and space projects must forthwith be canceled and every energy diverted to feeding and cleansing the world. Had this not happened, I could not be writing to you. Civilization would not have endured beyond 1980 and certainly would not have taken its present direction. For we have gone a long way in persuading people that "the natural state of man is ecstatic wonder."

- 84. According to the author,
 - 1] prior to 1960, psychoanalysts and their patients were serious and demure.
 - 2] Buddhism, Zen and Vedanta are not considered forms of ecstasy.
 - 3] Western civilization was not characterized by materialistic greed.
 - 4] In the search for ecstasy, the hippies went overboard.
- 85. Which word would best replace the word "consternation" as used in the second paragraph?

 1] confusion 2] amazement 3] delight 4] dismay

- 86. According to the passage, the explosion of interest in mysticism in the 1960's was later checked by
 - 1] threat of nuclear was and biological warfare.
 - 2] focus on issues related to environment and ecology.
 - 3] the interest is space travel and further investment in military equipment.
 - 4] institutionalization of the process of mysticism by institutes such as Mid-peninsula Free University.
- 87. According to the generation swayed by mysticism in the 1960's.
 - 1] it was more important to enjoy the experience than enjoy the financial benefits that accrue from it.
 - 2] the fear of being "nuked" was absent in their predecessors.
 - 3] celibacy and renunciation were opposites of mysticism and ecstasy.
 - 4] United States had to opposed as it favoured the Church in persecution of mysticism.
- 88. "But in the sixties, everything blew up". By this the author means
 - 1] that definition of mysticism changed significantly.
 - 2] that the popularity of Yoga, Buddhism, Zen and Vedanta increased exponentially.
 - 3] that there was a sudden increase globally in the number of people pursuing the path of mysticism.
 - 4] that youth, for the first time, joined the followers of ecstasy in hordes.

Passage 4 (1mark questions)

A social world view, one shared with other people, is structured from our infant minds by the impingements on us from, and the verifying responses to us by, other people. A mind finds its definition of itself not by confrontation with things so much as other minds. We are shaped by each other. We adjust not to the reality of a world but to the reality of other thinkers. When we have finally persuaded and/or badgered our children in to "looking objectively" at their situation, taking in to consideration those things other to themselves, we relax since they are being realistic. What we mean is that they have finally begun to mirror our commitments, verify our life investments, and strengthen and preserve the cosmic egg of our culture.

Occasionally we hear of people found chained in attics and such places from infancy. Their world view is either scanty or different for they are always feeble minded at best. In 1951 a child was found in an Irish chicken house, having somehow survived there with the chickens, since infancy. The ten-year old's long hair was matted with filth; he ate at the chicken trough; roosted with the flock; his fingernails had grown, fittingly, to semicircular claws; he made chicken-like noises, not surprisingly; he had no speech and showed no promise of learning any in the time he survived his rescue.

Forty years ago there was interest in two feral children found in India. They had apparently been raised by wolves. They were taken from an actual wolf den along with some cubs, the older wolves scattering or being killed. One of the children, Kamala they called her, survived for nine years. Only with difficulty was she taught table manners and such niceties as walking on the hind legs. Nevertheless she exhibited a growing awareness of the reward system of her new group, and displayed a strong drive toward such orientation. As with the chicken-child, however, she had missed the formatives period of human infant development, and there was no easy or complete going back to retrace the steps. Kamala had formed according to the pattern eliciting response around her during her mirroring period. For her first two years of captivity—or rescue—she howled faithfully at ten, twelve, and three at night, as all Indian wolves do. She would also, in spite of precautions, manage to get at the chickens, rip them apart alive and eat them raw. Only when the new social reward system grew strong enough to outweigh the earlier rewards did she abandon her early training.

What kind of minds did these feral children have? Jung claimed that no one is born a tabula rasa, a blank slate. As the body carries features specifically human yet individually varied, so does the psychic organism. The psyche preserves an unconscious stratum of elements going back to the invertebrates and ultimately the protozoa. Jung speaks of a hypothetical peeling of the collective unconscious, layer by layer, down to the psychology of the amoeba. We can trace a rough parallel in the development of the foetus.

As the body must be fed to realize the potential built in to the genes as a blueprint waiting development, so must the mind. Jung used the term archetype to describe "recurrent impressions made by subjective reactions." We inherit such ideas as part of our potential mind pattern. Archetypes, however, are only a kind of readiness to produce over and again the same mythical ideas. If the readiness is not triggered by a response or a demand, that particular possibility remains dormant and even steadily diminishes.

Linguists are intrigued by the readiness with which the infant seizes a language, if given the referents. The "readiness" of language can miscarry, as Susanne Langer put it, because of lack of the trigger-response interplay. If this happens, the world view shaped by that language miscarries too and never forms. Then participation in that kind of world is permanently blocked. Leonard Hall writes that our culture and our reality are not separate phenomena. People of different cultures not only speak different languages, but inherit different sensory worlds.

Levi-Strauss uses the term "semantic-universe" to describe our intellectual-scientific-technological fabric of reality. Jerome Bruner suggested that language is our most powerful means for performing "transformations" on the world. We transmute the world's shape by metaphoric mutations. We recombine our verbal structures in the interest of new possibilities.

Susanne Langer considered language to be conception and concept the frame of perception. Thus, for Langer, we live in a "primary world" of reality that is verbal. The word for a thing helps to arrest an infant's visual process and focus it on a specific thing. It is the combination of sensory possibilities, parental focus, and innate drives for ordering, that organizes the child's visual field. Then the word-thing growth becomes exponential, growing like a tree at every tip. Grouping, identifying, correlating, with a constant check with his exemplars, gives the young child an exciting participation and communion, a defining of self and world. Langer calls even nature a "language-made affair," made for understanding, and "prone to collapse in to chaos if ideation fails." Fear of this collapse may be the most potent fear in civilized man.

89. According to Jung,

- 1] homo-sapiens learns words because it is in their genes to do so, and that cannot be taken away.
- 2] while the mind is ready to learn things in a particular way it requires to be triggered to actually learn.
- 3] People of different cultures not only speak different languages, but also inherit different sensory worlds.
- 4] the mind of a new-born child is like an empty vessel, waiting to be filled,
- 90. Kamala howled at ten, twelve and three at night because
 - 1] all Indian wolves howl at those times.
 - 2] during her formative years, she was exposed to howling at these specified times and she too acquired the pattern.
 - 3] she was rewarded for howling at these times.
 - 4] none of the above
- 91. The tone of the passage can be best described as
 - 1] informative 2] analytical 3] argumentative 4] cynical.

- 92. According to the passage,
 - 1] The mind is shaped more by our interaction with others, rather then confrontation with worldly things.
 - 2] All children demonstrate a readiness towards learning a new language only in their formative years.
 - 3] Parental focus on learning is solely responsible for acquisition of knowledge in a child.
 - 4] Archetype can be revealed by the hypothetical peeling of the psyche, layer by layer.
- 93. Fear of the collapse may be the most potent fear in civilized man. What does "this collapse" refer to
 - 1] collapse of nature
 - 2] failure of our understanding of nature.
 - 3] the inability of the human mind to group, identity and correlate visual stimuli with words.
 - 4] the inability of the child to accept the "world view" as presented by its parents.

Passage 5 (1mark questions)

Science, ever since it first existed, has had important effects in matters that lie outside the purview of pure science. Men of science have differed as to their responsibility for such effects. Some have said that the function of the scientist in society is to supply knowledge, and that he need not concern himself with the use to which this knowledge is put. I do not think that this view is tenable, especially in our age. The scientist is also a citizen; and citizens who have any special skill have a public duty to see, as far as they can, that their skill is utilised in accordance with the public Historically, the functions of the scientists in public life have generally been recognised. The Royal Society was founded by Charles II as an antidote to 'fanaticism' which had plunged England into a long period of civil strife. The scientists of that time did not hesitate to speak out on public issues, such as religious toleration and the folly of prosecutions for witchcraft. But although science has, in various ways at various times, favoured what may be called a humanitarian outlook, it has from the first had an intimate and sinister connection with war. Archimedes sold his skill to the Tyrant of Syracuse for use against the Romans; Leonardo secured a salary from the Duke of Milan for his skill in the art of fortification; and Galileo got employment under the Grand Duke of Tuscany because he could calculate the trajectories of projectiles. In the French Revolution the scientists who were not guillotined were set to making new explosives, but Lavoisier was not spared, because he was only discovering hydrogen which, in those days, was not a weapon of war. There have been some honourable exceptions to the subservience of scientists to warmongers. During the Crimean War, the British Government consulted Faraday as to the feasibility of attack by poisonous gases. Faraday replied that it was entirely feasible, but that it was inhuman and he would have nothing to do with it.

Modern democracy and modern methods of publicity have made the problem of affecting public opinion guite different from what it used to be. The knowledge that the public possesses on any important issue is derived from vast and powerful organisations; the press, radio, and above all, television. The knowledge that Governments possess is more limited. They are too busy to search out the facts for themselves, and consequently they know only what their underlings think good for them unless there is such a powerful movement in a different sense that politicians cannot ignore it. Facts which ought to guide the decisions of statesmen - for instance, as to the possible lethal qualities of fall-out - do not acquire their due importance if they remain buried in scientific journals. They acquire their due importance only when they become known to so many voters that they affect the course of the elections. In general, there is a widespread opposition by public to such facts. This opposition springs from various sources, some sinister, some comparatively respectable. At the bottom of the moral scale there is the financial interest of the various industries connected with armaments. Then there are various effects of a somewhat thoughtless patriotism, which believes in secrecy and in what is called 'toughness.' But perhaps more important than either of these is the unpleasantness of the facts, which makes the general public turn aside the pleasanter topics such as divorces and murders. The consequence is that what ought to be known widely throughout the general public will not be known unless great efforts are made by disinterested persons to see that the information reaches the minds and hearts of vast numbers of

people. I do not think this work can be successfully accomplished except by the help of men of science. They, alone, can speak with the authority that is necessary to combat the misleading statements of those scientists who have permitted themselves to become merchants of death. If disinterested scientists do not speak out, the others will succeed in conveying distorted impressions, not only to the public but also to the politicians.

It must be admitted that there are obstacles to individual action in our age which did not exist at earlier times. Galileo could make his own telescope. But once when I was talking to a very famous astronomer he explained that the telescope upon which his work depended owed its existence to the benefactions of enormously rich men, and, if he had not stood well with them, his astronomical discoveries would have been impossible. More frequently, a scientist only acquires access to enormously expensive equipment if he stands well with the government of his country. He knows that if he adopts a rebellious attitude he and his family are likely to perish along with the rest of civilised mankind. It is a tragic dilemma, and I do not think that one should censure a man whatever his decision; but I do think and I think men of science should realise — that unless something rather drastic is done under the leadership or through the inspiration of some part of the scientific world, the human race, like the Gadarene swine, will rush down a steep place to destruction in blind ignorance of the facts that scientific skill has prepared for it.

It is impossible in the modern world for a man of science to say with any honesty, 'My business is to provide knowledge, and what use is made of the knowledge is not my responsibility.' The knowledge that a man of science provides may fall into the hands of men or institutions devoted to utterly unworthy objects. I do not suggest that a man of science, or even a large body of men of science, can altogether prevent this, but they can diminish the magnitude of the evil.

There is another direction in which men of science can attempt to provide leadership. They can suggest and urge in many ways the value of those branches of science of which the important practical uses are beneficial and not harmful. Consider what might be done if the money at present spent on armaments were spent on increasing and distributing the food supply of the world and diminishing the population pressure. In a few decades, poverty and malnutrition, which now afflict more than half the population of the globe, could be ended. But at present almost all governments of great states consider that it is better to spend money on killing foreigners than on keeping their own subjects alive. Possibilities of a hopeful sort in whatever field can best be worked out and stated authoritatively by men of science; and, since they can do this work better than others, it is part of their duty to do it.

As the world becomes more technically unified, life in an ivory tower becomes increasingly impossible. Not only so; the man who stands out against the powerful organisations which control most of human activity is apt to find himself no longer in the ivory tower, with a wide outlook over a sunny landscape, but in the dark and subterranean dungeon upon which the ivory tower, was erected. To risk such a habitation demands courage. It will not be necessary to inhabit the dungeon if there are many who are willing to risk it, for everybody knows that the modern world depends upon scientists, and, if they are insistent, they must be listened to. We have it in our power to make a good world; and, therefore, with whatever labour and risk, we must make it.

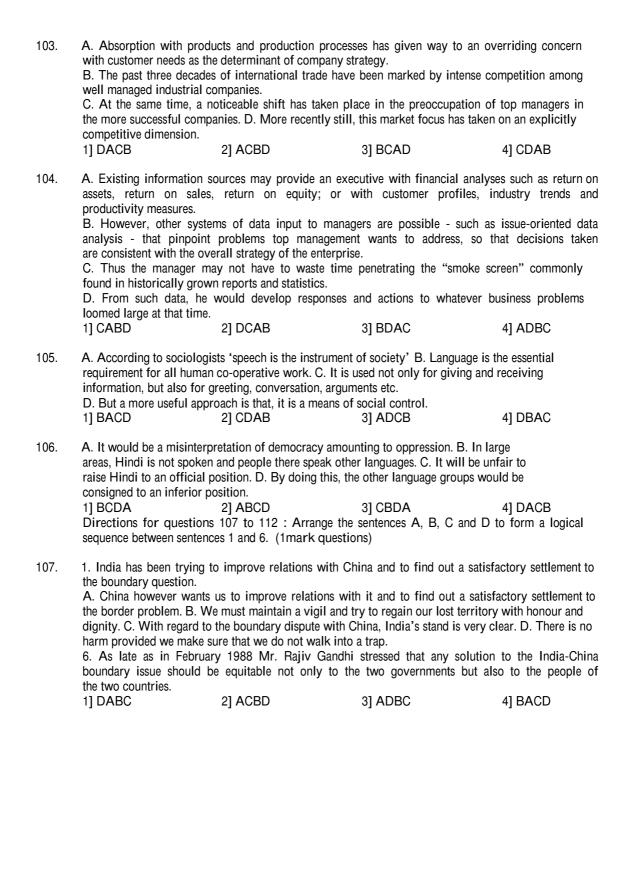
- 94. Developments in science have their effects
 - 1] only on scientific matters.
- 2] only in its field application.
- 3] on science and society.
- 4] on scientists.
- 95. The writer says that people turn to 'divorce ' and 'murder' as pleasanter topics than scientific facts because
 - 1] they don't understand scientific facts.
 - 2] they are not ready to face scientific facts.
 - 3] 'divorce' and 'murder' are more sensational.
 - 4] they are unwilling to think.

- 96. A 'disinterested' scientist is one
 - 1] who is not interested in the effects of science on society.
 - 2] who is neutral to the effects of science on society.
 - 3] who looks at the effects of science as they really are.
 - 4] who is devoted to humanitarian considerations.
- 97. According to the author, scientists were misused by the society by
 - 1] imposing restrictions on their works.
 - 2] bringing conflicts among scientists.
 - 3] using their findings for wrong purposes.
 - 4] misleading people against scientists.
- 98. According to the passage, men of science differ
 - 1] in their areas of specialisation.
 - 2] in their attitude toward their work.
 - 3] in their concern regarding social responsibilities.
 - 4] in their approaches to people's beliefs and practices.
- 99. The dilemma of a scientist results from the fact that
 - 1] it is impossible to escape from it.
 - 2] it is avoidable but scientists do not avoid it.
 - 3] either choice leads to the destruction of the whole world.
 - 4] either choice puts the scientist in a difficult situation.
- 100. Which of the following is not a consequence of scientific development?
 - 1] It has questioned blind faith and religious practices.
 - 2] It has changed the outlook of mankind.
 - 3] It has brought about peace and harmony.
 - 4] It has developed scientific attitude and temper among people.

Directions for questions 101-106: A number of sentences are given below which, when properly sequenced, form a coherent paragraph. Each sentence is labeled with a letter. Choose the most logical order of sentences from among the four given choices to construct a coherent paragraph. (1mark questions)

- 101. A. Exquisite paintings on walls of village huts, 'rangoli' at doorways during festivals to guide the goddess Laxmi into households on Diwali are all spontaneous creative expressions of the ladies of the house. B. But thanks to the current craze for ethnic, the best of the old is now back with a vengeance. C. Walls and floors have traditionally been mediums of self-expression in India.
 - D. Now with synthetic paints replacing the dung plastering on walls and printed vinyl wallpapers adding that dash of modern artistry, one would think the traditional has well and truly been displaced.
 - 1] CADB 2] BDAC 3] DBCA 4] BCAD
- 102. A. But the basic colour vocabulary of even the richest language is pitifully small fewer than a dozen words.
 - B. The human eye can discern the difference between several million colours of varying hue, saturation and lightness.
 - C. It is not colour awareness that is lacking but a colour vocabulary.
 - D. All other colour terms are a matter of qualifying a basic word, such as light blue or dark green.

11	ACDB	21 BADC	31 DBCA	41 CBDA
	7000	2 0/10/0	אטטט ן ט	41 0007



They were of German Dutch Origin. B. They later moved to Staffordshire where the conditions were more favourable. C. Their father was a nobleman from Saxony and their mother the daughter of a Burgomaster of Amsterdam. D. Although the brothers were originally silversmiths they also studied the manufacture of salt glazed stoneware in Cologne. 6. One of the brothers John, was also a clever chemist. 3] ABDC 1] BACD 2] CBAD 4] DBAC 109 1. The use of china clay in earthenware manufacture was a great success. A. The use of moulds made it possible to produce exact copies in great quantities. B. Numerous new factories were established using this new development. C. Various other new processes associated with it such as the employment of porous plaster moulds were also begun. D. The body became whiter, much stronger and lent itself to mass production. 6. The production costs decreased and the purchase of pottery was made available to a much wider public. 1] BCDA 31 CDAB 21 ACBD 41 DBCA 1. Early in the eighteenth century Astbury of Shelton succeeded in making white salt glazed 110. storeware. A. Incidentally the first use of china clay as a raw material for giving greater whiteness to an earthenware paste is attributed to his son. B. It is said that he got his knowledge of the Ehler's secret formula by getting a job at their factory. C. The manufacture of white salt glazed stoneware reached the height of perfection in the middle of the eighteenth century. D. After having obtained their secret he started a business of his own. 6. Very tastefully decorated storeware was made in those days lending itself marvellously to decoration by painting. 1] ABDC 2] BDAC 3] BADC 4] DBCA 111. 1. The porcelain factory at Chelsea seems to have been established in 1730 with the participation of the Ehler brothers. A. Statuettes and figures were made in large quantities. B. Tableware was also very tastefully decorated and designed. C. The factory and ware reached their peak of perfection and success between 1750 and 1765. D. In those years the factory was hardly able to execute all the orders which it received from the royal family and especially from the aristocracy. 6. In 1769 the factory was bought by Dewsbery of Derby. 3] CDAB 2] ACBD 4] CABD 1] BCDA 112. 1. Secret formulae are slowly but surely being replaced by scientific principles. A. Thus more and more people are able to buy it. B. But the processes have been speeded up by mass production. C. This makes ceramic ware inexpensive. D. The potters today are still wonderful craftsmen. 6. As regards design and decoration the transition period to mass production was not an easy 1] ADCB 2] BACD 3] DBCA 4] CDBA

1. The Ehler brothers originally started a factory for the manufacture of stoneware in London. A.

108.

DIRECTIONS for questions 113 to 116: Each pair of capitalised words given below is followed by 4 pairs of words. Select the pair which expresses the relationship similar to that expressed in the capitalised pair of words. (0.5mark questions)

113. COUP : USURP 114.MIRACLE : GODMAN 1] riots : communal 1] vanish : spirit 2] curfew 2] chair : restrict : carpenter 3] trapeze 3] terrorist : attack : acrobat 4] army : strifetorn 4] trick : magician 115. UNHOLY : NEXUS 116. WEEDS : NEGLECT 1] criminal : politician 1] stress : tension 2] truth : fiction 2] plants : chemicals 3] dubious : distinction 3] body : ignore 41 bomb : blast 41 sin : crueltv

Directions for questions 117- 122: Beneath each sentence, four different ways of phrasing the underlined part are indicated. Choose the alternative from among the four. (1mark questions)

- 117. The bank is more likely to succeed in adapting its business to the more competitive operating environment than other public sector banks thanks to their size and the quality of their management.
 - 1] than other public sector banks', thanks to their size and the quality of their management. 2] than other public sector banks,' thanks to its size and the quality of their management.

 - 3] than other public sector banks, thanks to its size and the quality of its management.
 - 4] than other public sector banks, thanks to their size and the quality of its management.
- 118. PC penetration in India is still low and with uneven distribution between geographies and different segments of society.
 - 1] and with uneven distribution between geographies and different segments of society.
 - 2] but with uneven distribution among geographies and different segments of society.
 - 3] and is unevenly in distribution between geographies and different society's segments.
 - 4] and unevenly distributed between geographies and different segments of society.
- 119. Scarcely had they come out of one trauma, than the new ones caught them off- guard.
 - 1] trauma, than the new ones
- 2] trauma, when the new ones
- 3] trauma, when the new one's
- 4] trauma, than the new one's
- 120. The problem of top players' clashing with one another in the early rounds of a match was solved in tennis long ago through 'seeding'.
 - 1] The problem of top players' clashing
- 2] The clashing problem of top player's
- 3] The problem of top players clashing
- 4] The problem among top players clashing
- 121. Teachers should converse freely with their students, inculcate values, encouraging extracurricular activities.
 - 1] encouraging extra curricular activities.
 - 2] and encourage extracurricular activities.
 - 3] and so is encouraging extracurricular activities.
 - 4] encourage extracurricular activities.
- 122. India's family business houses, which created their fortunes in the pre - liberalization era, will need to bring about significant changes if it wishes to continue at the helm.
 - 1] changes if it wishes to continue at the helm.
 - 2] changes whether it wishes to continue at the helm.
 - 3] changes if one wishes to continue at the helm.
 - 4] changes if they wish to continue at the helm.

indicated. Choose the word / phrase that best completes the sentence. (1mark questions) 123. authors and publishers as to who should be responsible for maintaining the biblio site. 2] There is an ongoing tussle between 1] There is a growing concord among 3] There is an ongoing tussle among 4] There is a lack of concern between 124. The normal man is subject to a number of fears; fear of what will happen tomorrow, indeed, __is inherent in every being 1] fear of the unknown 2] fear of losing things 3] fear of the foregone 4] fear of the present 125. Our inner universe manifests itself outwardly in sickness and health, in joy and sorrow and 1] in peace and calmness. 2] in tranquility and serenity. 3] in peace and stress. 4] in stress and strain. The love depicted in the writing is neither ___ nor _____; it is simply divine and seeks to 126. elevate the individual human self to a higher plane. 11 sensual.... platonic 2] carnal....static 4] affective....logical 3] spiritual.... emotional

Directions for questions 123 -126: In each of the following sentences, part/parts of the sentence is/are left blank. Beneath each sentence four different ways of completing the sentence are

SAMPLE OMR SHEET

NAI	NAME						DAT	E	
DIR	DIRECTIONS: 1 Mark your answer by darkening the appropriate circle with an HB Pencil. 2 Erase clearly any answer you want to change. 3 Make no stray mark anywhere on the score sheet.								
1 2 3 4 5	1 2 3 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	26 27 28 29 30	1 2 3 4 0000 0000 0000 0000 0000	51 52 53 54 55	1 2 3 4 0000 0000 0000 0000 0000	76 77 78 79 80	1 2 3 4 0000 0000 0000 0000	101 102 103 104 105	1 2 3 4 0000 0000 0000 0000
6 7 8 9 10	0000 0000 0000 0000	31 32 33 34 35	0000 0000 0000 0000 0000	56 57 58 59 60	0000 0000 0000 0000 0000	81 82 83 84 85	0000 0000 0000 0000	106 107 108 109 110	0000 0000 0000 0000
11 12 13 14 15	0000 0000 0000 0000	36 37 38 39 40	0000 0000 0000 0000 0000	61 62 63 64 65	0000 0000 0000 0000 0000	86 87 88 89 90	0000 0000 0000 0000	111 112 113 114 115	0000 0000 0000 0000
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