

TRIBHUVAN UNIVERSITY INSTITUTE OF SCIENCE AND TECHNOLOGY SCHOOL OF MATHEMATICAL SCIENCES

BALKHU, KATHMANDU, NEPAL

New Enrollment for B.Math.Sc. (Actuarial science) Eligibility for Admission

A candidate who has passed 10+2 or equivalent from any stream (Science / Management / Education / Arts) with one of the subjects being Mathematics of 100 marks or Business mathematics or equivalent in 11 / 12 grade is eligible to get admission through entrance examination.

1. Entrance Exam -Selection Criteria

The selection of students will be based on the following three criteria:

- A. Written Test
- B. Academic Qualifications
- C. Interview

A. Written Test - 80 Marks

The written test will be of 80 marks to be completed within 105 minutes. The test paper will have three sections as follows:

Test Sections	Number of Questions	Total Marks
Section I: Mathematics	40 questions	$40 \times 1 = 40 \text{ marks}$
Section II: English	20 questions	$20 \times 1 = 20$ marks
Section III: General Knowledge and IQ	20 questions	$20 \times 1 = 20$ marks

B. Academic Qualifications -10 Marks

The total 10 marks for the academic qualifications are distributed as follows:

Level	Distinction (75 %	First Division (60–	Second Division and			
	and above) or grade A ⁺	75) % or grade B ⁺	below or below 60 % or			
	and A	and B	below grade B			
SLC/SEE	5	3.5	2.5			
10+2 or equivalent	5	3.5	2.5			

Note: The Entrance Committee can adjust / modify the marking rule for academic qualifications.

C. Interview- 10 Marks

On the basis of the performance in written test, candidates will be short listed for interview. To qualify the students for the interview, the candidate must secure the cut-off marks (35 %). The interview is conducted for around 10 minutes by a panel of experts by considering with the following points:

- i) Body language and Politeness 1 mark
- ii) Dressing sense and Honesty 2 marks
- iii) Basic knowledge on Current affairs 3 marks
- iv) Knowledge about the Actuarial Sciences/ Vision/ Plan 2 marks
- v) Situational responses 2 marks

Note: The Entrance Committee can adjust/ modify the marking rule for interview

2. Written Entrance Model Question 2077

Full Marks: 80 Time: 1:45 Hrs

General Instructions

Please read the following instructions carefully before you start answering the questions.

- 1. Write your symbol No. on your answer sheet only.
- **2.** Do not write anything else on your question sheet.
- **3.** Use the blank paper given with the answer sheet for rough work.
- **4.** Mark your correct answers by **darkening option** on your answer sheet.
- **5.** Try answering all questions. *There is no negative marking for wrong answer.*
- **6.** All sheets (Question paper, answer sheet and rough papers) must be submitted with the answer sheets.

How to Answer the Questions?

1.	If $n(U)$	= 120.n(A)	=90 and n	(B)=55.t	nen minimum	value of n	$(A \cap B)$) is
	\mathbf{I} \mathbf{I} \mathbf{I} \mathbf{I} \mathbf{I}	- 120,11(11)	- Jo ana n	(D)		varae or n	(21112	, 10

a) 40

b) 25

c) 55

d) 35

Indicate your correct answer on the Answer Sheet

(a)

(b)

 $\binom{\mathbf{c}}{\mathbf{c}}$

 $\left(\mathbf{d}\right)$

Solution

You should indicate your answer by darkening the correct answer choice (b) as shown below:

a

 $\left(\mathbf{c} \right)$

 $\left(\begin{array}{c} \end{array}\right)$

Section-I: Mathematics (40 Marks)

Find the correct answer for the questions given below.

- 1. If n(U) = 120, n(A) = 90 and n(B) = 55, then minimum value of $n(A \cap B)$ is
 - a) 40
- b) 25
- c) 55
- d) 35
- 2. The solution set of the inequality $4 + 3x x^2 > 0$ is
 - a) $(-\infty, -1)$
- b) (4,∞)
- c) $(-\infty, \infty)$
- d) (-1, 4).

- 3. The range of the function $\frac{x+2}{|x+2|}$ is
 - a) $\{-1, 1\}$
- b) $\{-1, 0, 1\}$ c) $\{-2, 2\}$
- d) [-1,1]
- **4.** If $f(x) = 1 + \alpha x$, $(\alpha \neq 0)$ is the inverse of itself, then the value of α is
 - a) -2
- b) -1
- c) 0
- d)2

5.	$If \log_{1/2} x = -1$, then the value	of x is			
	a) 2	b) 1/2	c) –1		d) 0	
6.	If <i>n</i> A.M's are then the value		een 3 and 17 an	d the rati	o of first mean is to	last mean is 1:3,
	a) 4	b) 6	c) 8		d) 10	
7.		geometric proms. Then its co	•		n is equal to twice	the sum of the
	a) 2/3	b) 1/3	c) 5/4		d) 1/6	
8.		be the number bsets is 24, the			nite sets. If the difference	ference of their
	a) 7, 6	b) 5, 3	c) 6, 3		d) 6, 5	
9.	The number o	f ways in which	n distinct obje	cts can be	e put into three differ	ent boxes is
	a) 3n	b) 3 ⁿ	c) n^3		d) ⁿ p ₃	
10.	If ${}^{8}C_{r} - {}^{7}C_{3} =$	7 C ₂ , then the va	alue of r is			
	a) 3	b) 5	c) 7		d) 9	
11.	If A is a skew	symmetric matr	rix, then trace o	of A is		
	a) 1	b) –1	c) 0		d) 2	
12.	For any square	e matrix A, whi	ch of the follow	ving is tru	e?	
	$a) A = A^{\mathrm{T}} $	b) $ A^{-1} = A $	$c) A^{-1} = \frac{1}{ A }$		d) A adj(A) = A	
13.	Value of $\left(\frac{1-1}{1+1}\right)$	$\left(\frac{i}{i}\right)^{1000}$ is				
	a) –2	b) $-\frac{1}{2}$		c) 1	d) -	-1
14.	The straight li unit. Then the	•	rms a triangle	with the o	coordinate axes who	se area is 27 sq.
	a) 9	b) $-\frac{2^{2}}{2}$	<u>7</u>	c) ±18	d) =	±6
15.	If the vectors	$\overrightarrow{i} - 2\overrightarrow{j} + 4\overrightarrow{k}$	and $2\overrightarrow{i} + 7\overrightarrow{j}$	$+ m \overrightarrow{k}$	are orthogonal, then	the value of <i>m</i> is
	a) 3	b) $-\frac{1}{2}$		c) 2		d) –4
16.	The length of	the y-intercept 1	made by the cir	cle $x^2 + \frac{1}{2}$	$y^2 - 8x + y - 20 = 0 i$	S
	a) 5	b) 9		c) 7		d) 6
17.	_	_	_	_	$(xy+9y^2+3x-9y-4=0)$	
	a) $\sqrt{\frac{1}{5}}$	b) $\sqrt{\frac{5}{2}}$	5	c) $\frac{\sqrt{3}}{4}$	d)	$\frac{1}{2}$
18.	V J	V 4	<u> </u>	4	for 2 years at 10%	2

	a)Rs. 64.80 b)Rs.	7.20 c)Rs. ′	79.20	d)Rs. 88.88						
19.		=		t increases by 25% but the centage of the selling price						
	a) 30%	b) 100%	c) 70%	d) 250%						
20.		ourney in 10 hours. He nd half at the rate of 24		If of the journey at the rate al journey (in km.) is						
	a) 220 km	b) 230 km	c) 224km	d) 234 km						
21.	If 20% of $a = b$, then	<i>b</i> % of 20 is the same a	ns							
	a) 4% of <i>a</i>	b) 5% of <i>a</i>	c) 20% of <i>a</i>	d) None						
22.	Two cars start towards each other from points 200 miles apart. One car travels at 40 miles per hours and the other travel at 35 miles per hour. How far apart will the two cars be after four hours of continuous traveling?									
	a) 20	b) 40	c) 75	d) 100						
23.	In any triangle ABC,	if $a = 18$, $b = 24$ and c	= 30, then the 1	radius of in-circle is						
	a) 1	b) 9	c) 3	d) 6						
24.	In how many years payable half yearly?	will a sum of mone	y double itself	at 4% compound interest						
	a) 17 years	b) 17.5 years	c) 18 years	d) 18.5 years						
25.		rk in 8 days, B and C of it in 6 days. A and C to		work in 12 days. A, B and it in						
	a) 4 days	b) 6 days	c) 8 days	d) 12 days						
26.	If the sum of the root then the equation is	ts of a quadratic equat	ion is 1 and the	e sum of their square is 13,						
	a) $x^2 - x - 6 = 0$ b)	$x^2 - 12x + 13 = 0 c) x$	$x^2 - 5x + 6 = 0$	d) $x^2 - 7x - 10 = 0$						
27.		o be distributed among ore than D, what is B's		the proportion of 5:2: 4: 3.						
	a) Rs. 500	b) Rs. 1500	c) Rs. 2000	d) 400						
28.	The number of solu	tions of the system $x+4$	4y - z = 0, $3x - 4y - 4$	-z = 0 and $x - 3y + z = 0$ is						
	a) 0	b) 1	c) 2	d) infinite						
29.	The value of $\lim_{n\to\infty} \frac{1-n}{\sum_{n\to\infty}}$	$\frac{n^2}{n}$ is								
	a) 1	b) $\frac{1}{2}$	c) –2	d) –1						
30.	The point of discontin	uity of the function $\frac{1}{1+x}$	_							

exchange rate is £1= Rs. 72, what was the exchange rate 2 years ago?

	a) 1	b) 0	c) <i>e</i>	d) No discontinuity point				
31.	The differential coeff	Ficient of e^x with resp	pect to \sqrt{x} is					
	a) e^{x^2}	b) $e^{\sqrt{x}}$	c) $\frac{e^x}{e^{\sqrt{x}}}$	d) $2\sqrt{x}e^x$				
32.	If $y = \frac{x}{1} + \frac{x^2}{2} + \frac{x^3}{3} + \dots$, then $\frac{dy}{dx} =$						
	a) $\frac{1}{1-x}$	b) $ln(1-x)$	c) $ln(1+x)$	d) e^x				
33.	A function f is such t $f(x)$ is	hat $f'(4) = f^{''(4)} = 0$	and f has minim	um value 10 at $x = 4$. Then				
	a) $4+(x-4)^5$	b) $4+(x-4)^4$	c) $10+(x-4)^4$	d) $10+(x-4)^3$				
34.	The value of $\int \frac{e^{2x}}{1+e^x} dx$	dx is						
	a) $1+e^x - \ln(1+e^x) + C$		b) $e^x + \ln(1 + e^x)$	+C				
	c) $e^{x} - \ln(1 + e^{x}) + C$		d) $ln(1+e^x)+C$					
35.	The value of $\int_{2}^{3} f(5-$	$-x)dx - \int_{2}^{3} f(x)dx \text{ is}$						
	a) $2f(x) + C$	b)5	c) –3	d) 0				
36.	The area of the region	bounded by the curve	$es y = x^2 \text{ and } y = x $	is				
	a) $\frac{1}{2}$	b) $\frac{1}{4}$	c) $\frac{7}{3}$	d) $\frac{1}{3}$				
37.				kg. The mean weight of the the number of boys and girls				
	a) 60 and 40	b) 40 and 60	c) 50 and 50	d) 58 and 57				
38.		ecking, it was found	that two observation	ions were found to be 30 and ons were wrongly taken as 20				
	a) 29.90	b) 29	c) 19	d) 19.87				
39.	Which of the followin	g is correct?						

a) $MD = \frac{1}{N} \sum f |X - X|$

a)
$$MD = \frac{1}{N} \sum f |X - X|$$

b) $MD = \frac{1}{N} \sum f |X + M_0|$

c)
$$M_o = \frac{f_M - f_p}{(f_M - f_p) + (f_M - f_s)} \times h$$
 d) all

The probability that there will be 5 sundays in the month of July is **40.**

a)
$$\frac{3}{7}$$
 b) $\frac{5}{12}$ c) $\frac{5}{7}$ d) $\frac{3}{30}$

Section-II: English (20 Marks)

Read the passage below and answer Q.no.41 to 45.

Philosophy of Education is a label applied to the study of the purpose, process, nature and ideals of education. It can be considered a branch of both philosophy and education. Education can be defined as the teaching and learning of specific skills, and the imparting of knowledge, judgment and wisdom, and is something broader than the societal institution of education we often speak of.

Many educationalists consider it a weak and woolly field, too far removed from the practical applications of the real world to be useful. But philosophers dating back to Plato and the Ancient Greeks have given the area much thought and emphasis, and there is little doubt that their work has helped shape the practice of education over the millennia.

Plato is the earliest important educational thinker, and education is an essential element in "The Republic" (his most important work on philosophy and political theory, written around 360 B.C.). In it, he advocates some rather extreme methods: removing children from their mothers'care and raising them as wards of the state, and differentiating children suitable to the various castes, the highest receiving the most education, so that they could act as guardians of the city and care for the less able. He believed that education should be holistic, including facts, skills, physical discipline, music and art. Plato believed that talent and intelligence is not distributed genetically and thus is be found in children born to all classes, although his proposed system of selective public education for an educated minority of the population does not really follow a democratic model.

Aristotle considered human nature, habit and reason to be equally important forces to be cultivated in education, the ultimate aim of which should be to produce good and virtuous citizens. He proposed that teachers lead their students systematically, and that repetition be used as a key tool to develop good habits, unlike Socrates' emphasis on questioning his listeners to bring out their own ideas. He emphasized the balancing of the theoretical and practical aspects of subjects taught, among which he explicitly mentions reading, writing, mathematics, music, physical education, literature, history, and a wide range of sciences, as well as play, which he also considered important.

During the Medieval period, the idea of Perennialism was first formulated by St. Thomas Aquinas in his work "De Magistro". Perennialism holds that one should teach those things deemed to be of everlasting importance to all people everywhere, namely principles and reasoning, not just facts (which are apt to change over time), and that one should teach first about people, not machines or techniques. It was originally religious in nature, and it was only much later that a theory of secular perennialism developed.

During the Renaissance, the French skeptic Michel de Montaigne (1533 – 1592) was one of the first to critically look at education. Unusually for his time, Montaigne was willing to question the conventional wisdom of the period, calling into question the whole edifice of the educational system, and the implicit assumption that university-educated philosophers were necessarily wiser than uneducated farm workers.

41.	What	t is the difference between the app	proaches of Socrates	and Aristotle?							
	a)	Aristotle felt the need for repet	ition to develop good	d habits in students;							
	Socrates felt that students need to be constantly questioned										
	b)	Aristotle felt the need for rote-	learning; Socrates en	nphasized on dialogic							
		learning									
	c)	There was no difference									
	d)	Aristotle emphasized on the im Socrates emphasized upon scie		attention to human nature;							
42.	Why	do educationists consider philoso	ophy a 'weak and wo	olly' field?							
	a)	It is irrelevant for education	1 3	J							
	b)	Its theoretical concepts are easi	ly understood								
	c)	It is not practically applicable	•								
	d)	None of the above									
43.	What	t do you understand by the term 'l	Perennialism', in the	context of the given							
	comp	prehension passage?									
	a)	It refers to something which is	of ceaseless importa	nce							
	b)	It refers to something which is	quite unnecessary								
	c)	It refers to something which is	abstract and theoreti	cal							
	d)	It refers to something which ex	isted in the past and	no longer exists now							
44.	Were	e Plato's beliefs about education d	lemocratic?								
	a)	He believed that only the rich h	nave the right to acqu	ire education							
	b)	Yes									
	c)	He believed that only a select f	ew are meant to atter	nd schools							
	d)	He believed that all pupils are	not talented								
45.	Why did Aquinas propose a model of education which did not lay much emphasis on										
	facts										
	a)	Facts are not important	.•								
	b)	Facts do not lead to holistic ed									
	c)										
	d)	Facts are frozen in time									
Find	the cor	rrect answer for the questions g	given below.								
46 .	The p	police arrivedthe nick of time a	and caught the crimin	nal red handed.							
	a) at	b) by	c) on	d) in							
47 .	It app	pears that she is enjoying herself	?								
	a) do	bes she b)doesn't she	c) isn't it	d)isn't she							
48 .	The r	new teacher says, "Some students	are extraordinarily br	illiant." can be reported as:							
	a)	The teacher says that some stud	dents were extraordin	narily brilliant.							
	b)	The teacher said that some stud	lents are extraordina	rily brilliant.							
	c)	The teacher says that some stud	dents are extraordina	rily brilliant.							
	d)	The teacher says that some stud	dents had been extra	ordinarily brilliant.							
49 .	The r	negative statement of "Very few i	nvitees participated i	n the seminar." is							
	a)	Very few invitees didn't partic									
	b)	Noinvitees participated in the s									
	,	1 1									

	•	nvitees participated in the nvitees didn't participate		
50.		wing is closest in meani t regard to common sen		dheres rigidly to book
	a) assassinator	b) black sheep	c) chromatics	d) pedant
51.	underlined word is	aeuphemismfor an ung s b) substituted word		best definition of the d) an assistant
52.	a) to examine	n meaning to the phrase	b) to distribute	oag"?
53.	You hit me so a) hardly	with th	e ball that my arm is s c) force	till aching. d) hard
54.	Thethat all a) illusion	doctors are infallible stil b) allusion	ll persists in some part c) delusion	s of the world. d)elision
55 .	residence.	oing skills were a	_	new job nearby her d) partiality
56 .	The art of gardening a) cariculture	ng is called b) periculture	c) floriculture	d) horticulture
57.	The correct synong a)ebullient	ym of the word <u>exubera</u> b) versatile		d) extempore
58.	restaurant.	d about having a banana b) had me to try		
59.	"Wordsworth's povoice as a) The memories of b) Wordsworth's pour c) The memories of the m	of the past are evoked by the poems are evoked by the of the past is evoked by the poems is evoked by the rooms is evoked by the rooms is	es of the past." Can be Wordsworth's poems memories of the past. Wordsworth's poems.	written in the passive
60.	He talks about Dhaa) has lived	aran in such a way as if b) lived	hethere for ages. c) had liven	d) lives
	Section-III:	General Knov	vledge and IQ (2	20 Marks)
Choo	ose the correct ansv	ver for the questions gi	ven below.	
61.	Who was the bowl ICC Test Career? a) SalilAnkola	ler to bowl out Sachin T b) Shahid Saeed	endulkar for the first t c) RuwanKalpage	ime ever in Sachin's d) WaqarYounis
62 .	,	st glacier of Asia contin	, 1 0	a) maqui i ouins

	c) Siachen Glacier	d) Gondogoro Glaci	er
63.	 Which were the three ships that C a) The Nina, The Pinta and S b) The Nina, Santa Maria and S c) The Nina, The Pinta and S d) Santa Maria, The Pinta and S 	Santa Barbara Id Santa Barbara Santa Maria	st voyage to America?
64 .	Who was the creator of the famou a) Julian Assange and Mark Juck c) Bill Gates and Sergey Brin	terberg b) Jimm	ny Wales and Larry Sanger ey Brin and Larry Sanger
65 .	Who wrote the autobiography "Ta) Helen Kellerc) Barrack Obama	he Story of My life"? b) Mahatma Gandhi d) Nelson Mandela	
66.	Which is the biggest Hydro Proinvestors? a) Upper Trishuli Hydro Project c) Upper Tarun III Hydro Project	b) Upper Ka	ly financed by the Nepalese rnali Hydro Project makoshi Hydro Project
67 .	Which famous international bran to?	_	_
68 .	a) BMWb) AppleWhich animal is imprinted in a 50a) Cowb) Rhino	c) Toyota00 rupees Nepali note?c) Elephant	d) L'Oreald) Tiger
69 .	To which product is the brand na a) sanitary pads b) bakery	me "Bimbo" associated c) automobiles	with? d) toothpaste
70.	Who is the author of the famous movies? a) Rabindra Nath Tagore c) Sarat Chandra Chattopadhyay	_	a Rai Bachhan
71.	Who said "You must be the chan a) Barack Obama c) Narendra Modi	ge you wish to see in the b) Donald Trump d) Mahatma Gandhi	
72 .	In which district is Jhilmile Taal a) Kanchanpur b) S	located? Surkhet c) Pa	ılpa d) Kaski
73 .	If Pacific Ocean is Triangular shaped, what is the shape of India a) Rectangular b) English Alphab	an Ocean?	ocean is English alphabet S al d) English Alphabet U
74 .	Which number should come next a) 435 b) 543	t in the sequence 123, 23 c) 456	4, 345,? d) 453
75 .	Marathon is to race as hibernation a) sleep b) bear	n is to c) dream	d)winter
76 .	Pointing to a photograph of a bomother." How is Suresh related to a) son b) uncle	•	

77 .	7. Two students appeared at an examination. One of them secured 9 marks more that other and his marks was 56% of the sum of their marks. The marks obtained by are:								
	a) 39, 30	b) 41, 32	c) 42, 33	d) 43,					
78 .	8. The angle of elevation of a ladder leaning against a wall is 60° and the foot ladder is 4.6 m away from the wall. The length of the ladder is:								
	a) 9.2 m	b) 2.9 m	c) 7.8 m	d) 8.7 m					
79 .	Complete the following	ng word analogy	y: Buzz: Bees :: Chir	rp:?					
	a) bat	b) sparrow	c) monkey	d) cricket					
80.	turned to her left. A	gain after some turned to her rig	time she turned to he	ne sun. After some time she r right. After moving some ve. At this time, in which					
	a) North	b) East	c) West	d) South					

Sample Answer Sheet

		Sym	bol N	<i>lo.</i> :	• • • • •	• • • • • • •	•												
	Symbol No. (In Words):																		
1.	a	b	c	d	21.	a	b	C	d	41.	a	b	C	d	61.	a	b	c	\bigcirc d
2.	a	b	c	\bigcirc d	22.	a	b	c	\bigcirc d	42.	a	b	C	\bigcirc d	62.	a	b	c	\bigcirc d
3.	a	b	C	\bigcirc d	23.	a	b	C	\bigcirc d	43.	a	b	c	\bigcirc d	63.	a	b	c	\bigcirc d
4.	a	b	c	\bigcirc d	24.	a	b	c	\bigcirc d	44.	a	b	C	\bigcirc d	64.	a	b	c	\bigcirc d
5.	a	b	c	\bigcirc d	25.	a	b	C	\bigcirc d	45.	a	b	c	\bigcirc d	65.	a	b	c	\bigcirc d
6.	a	b	c	\bigcirc d	26.	a	b	C	\bigcirc d	46.	a	b	c	\bigcirc d	66.	a	b	c	\bigcirc d
7.	a	b	c	\bigcirc d	27.	a	b	C	\bigcirc d	47.	a	b	C	\bigcirc d	67.	a	b	c	\bigcirc d
8.	a	b	c	\bigcirc d	28.	a	b	c	\bigcirc d	48.	a	b	C	\bigcirc d	68.	a	b	c	\bigcirc d
9.	a	b	c	\bigcirc d	29.	a	b	C	\bigcirc d	49.	a	b	C	\bigcirc d	69.	a	b	c	
0.	a	b	c	\bigcirc d	30.	a	b	C	\bigcirc d	50.	a	b	C	\bigcirc d	70.	a	b	c	\bigcirc d
1.	a	b	\bigcirc c	\bigcirc d	31.	a	b	C	\bigcirc d	51.	a	b	C	\bigcirc d	71.	a	b	c	
2.	a	b	C	\bigcirc d	32.	a	b	C	\bigcirc d	52.	a	b	\bigcirc c	\bigcirc d	72.	a	b	C	\bigcirc d
3.	a	b	C	\bigcirc d	33.	a	b	\bigcirc c	\bigcirc d	53.	a	b	C	\bigcirc d	73.	a	b	c	\bigcirc d
4.	a	b	C	\bigcirc d	34.	a	b	C	\bigcirc d	54.	a	b	C	\bigcirc d	74.	a	b	c	
5.	a	b	c	\bigcirc d	35.	a	b	\bigcirc c	\bigcirc d	55.	a	b	\bigcirc c	\bigcirc d	75.	a	b	c	
6.	a	b	C	\bigcirc d	36.	a	b	\bigcirc c	\bigcirc d	56.	a	b	C	\bigcirc d	76.	a	b	c	
7.	a	b	C	\bigcirc d	37.	a	b	C	\bigcirc d	57.	a	b	C	\bigcirc d	77.	a	b	C	\bigcirc d
8.	a	b	c	\bigcirc d	38.	a	b	\bigcirc c	\bigcirc d	58.	a	b	\bigcirc c	\bigcirc d	78.	a	b	c	
9.	a	b	C	\bigcirc d	39.	a	b	C	\bigcirc d	59.	a	b	\bigcirc c	\bigcirc d	79.	a	b	c	
20.	a	b	\bigcirc	\bigcirc d	40.	a	b	C	\bigcirc d	60.	a	b	C	\bigcirc d	80.	a	b	c	$\bigcirc d$

Marks Obtained:

Marks Obtained (In Words):