Test Booklet No. _____
This booklet consists of 100 questions and 16 printed pages.

RGUCET/2024/__/_

Series | NIL

RGUCET 2024
Common Entrance Test, 2024
MASTER OF COMPUTER APPLICATION (COMPUTER APPLICATION)

Full Marks: 100   **Time: 2 Hours**

Roll No. ☐☐☐☐☐☐☐☐

Day and Date of Examination: _____

Signature of Invigilator(s) _____

Signature of Candidate _____

General Instructions:

PLEASE READ ALL THE INSTRUCTIONS CAREFULLY BEFORE MAKING ANY ENTRY.

1. DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO.
2. Candidate must write his/her Roll Number on the space provided.
3. This Test Booklet contains 100 Multiple Choice Questions (MCQs) from the concerned subject. Each question carries 1 mark. There shall be negative marking of 0.25 against each wrong attempt.
4. Please check the Test Booklet to verify that the total pages and total number of questions contained in the test booklet are the same as those printed on the top of the first page. Also check whether the questions are in sequential order or not.
5. Candidates are not permitted to enter into the examination hall after the commencement of the entrance test or leave the examination hall within one hour thirty minutes.
6. Making any identification mark in the OMR Answer Sheet or writing Roll Number anywhere other than the specified places will lead to disqualification of the candidate.
7. Candidates shall maintain silence inside and outside the examination hall. If candidates are found violating the instructions mentioned herein or announced in the examination hall, they will be summarily disqualified from the entrance test.
8. In case of any dispute, the decision of the Entrance Test Committee shall be final and binding.
9. The OMR Answer Sheet consists of two copies, the Original copy and the Student's copy.

1	Who is the first Asian athlete to win an Olympic gold medal in javelin				Answer option (a)
	a)Neeraj Chopra	b)Rjyavardhan Singh Rathore	c)Sakura Yosozumi	d)Abhinav Bindra	Neeraj Chopra
2	Match National Parks with their respective State:				Answer option (b)

A Bison	i Uttarakhand
B Raimona	ii Tripura
C Jim Corbett	iii Arunachal Pradesh
D Eagle Nest	iv Assam

	a)A-iii, B-iv, C-i, D-ii	b)A-ii, B-iv, C-i, D-iii	c)A-i, B-iii, C-ii, D-iv	d)A-ii, B-iv, C-iii, D-i	A-ii, B-iv, C-i, D-iii
3	Following statements are either True or False: A. India shares a border with China. B. Nepal is a landlocked country that shares a border with India. C. Sri Lanka shares a land border with India. D. India shares a border with Myanmar. Choose the correct answers from options given below:				Answer option (d)
	a) A & B only	b) A & D only	c) A, C & D only	d) A, B & D only	A, B & D only
4	The full form of multi-party political alliance named "INDIA" is				Answer option (c)
	a) Indian National Democratic Inclusive Alliance	b) Indian National Democratic Independent Alliance	c) Indian National Developmental Inclusive Alliance	d) Indian National Developmental Independent Alliance	Indian National Developmental Inclusive Alliance
5	Golden Lotus and Silver Lotus are official names of National _____ awards				Answer option (b)
	a) Sports	b) Film	c) Bravery	d) Civil	Film
6	Following statements are either True or False: A. The union of two sets A and B, denoted A∪B, contains all elements that are in A or B or both. B. The intersection of two sets A and B, denoted A∩B, contains all elements that are in A but not in B. C. The empty set, denoted by ∅, is a subset of every set. D. The complement of a set A in a universal set U, denoted by A^c or U −A, contains all the elements that are in A. Choose the correct answers from options given below:				Answer option (c)
	a) A, B & C only	b) B & D only	c) A & C only	d) A, C & D only	A & C only
7	Assertion (A): The sum of the interior angles of a polygon with n sides is $(n-2)\times180^o$ Justification (B): A polygon can be divided into n−2 triangles, and the sum of the interior angles of each triangle is 180°.				Answer option (a)

	a) Both A and B are true, and B is the correct explanation of A.	b) Both A and B are true, but B is not the correct explanation of A.	c) A is true, but B is false.	d) A is false, but B is true.	Both A and B are true, and B is the correct explanation of A.
8	A sum of 83 rupees is divided among A, B and C in such a way that A gets Rs. 7 more than what B gets and B gets Rs. 8 more than what c gets. The ratio of their shares (A : B : C) is:				Answer option (c)
	a) 37 : 30 : 22	b) 37 : 17 : 09	c) 35 : 28 : 20	d) None of these	35 : 28 : 20
9	The value which occurs most frequently in a set of observations is called:				Answer option (a)
	a) Mode	b) Median	c) Mean	d) None of these	Mode
10	If South-East becomes North and South becomes North-East and all the rest directions are changed in the same manner, then match the following pairs: A West becomes — i West B North-East becomes — ii South-West C North becomes — iii East D South-West becomes — iv South-East				Answer option (d)
	a) d) A-ii, B-i, C-iv, D-iii	b) d) A-iv, B-iii, C-ii, D-i	c) d) A-ii, B-iii, C-iv, D-i	d) A-iv, B-i, C-ii, D-iii	A-iv, B-i, C-ii, D-iii
11	Replace the question mark with an option that follows the same logic applied in first pair. 3 : 11 :: 5 : ?				Answer option (b)
	a) 51	b) 27	c) 66	d) 21	27
12	Identify the odd one out from the group: 1. Python 2. Java 3. HTML 4. C++				Answer option (c)
	a)Python	b)Java	c)HTML	d)C++	HTML
13	Assertion(A): ChatGPT is capable of generating human-like text responses. Justification (B): ChatGPT is based on a transformer neural network model trained on a large corpus of text data.				Answer option (a)
	a)Both A and B are true, and B is the correct explanation of A.	b)Both A and B are true, but B is not the correct explanation of A.	c)A is true, but B is false.	d)A is false, but B is true.	Both A and B are true, and B is the correct explanation of A.

14	Which of the following statements are true? A. A rational number can have an infinite decimal expansion B. The sum of the digits of a multiple of 9 is always a multiple of 9. C. The factorial of a negative number is defined. D. An even number can never be a perfect square.				d
	a) A and C	b) C and D	c) B only	d) A and B	A and B
15	If following pattern is considered $5^2 + 1 = 26$, $6^2 + 1 = 37$, $7^2 + 1 = 50$, $9^2 + 1 = 82$, ..., then the value of x in $x^2+1 = 197$ will be ?				a
	a) 14	b) 12	c) 13	d) 15	14
16	Who was the first person associated with classical music to be awarded the Bharat Ratna?				d
	a) Bismillah Khan	b) Bhimsen Joshi	c) C. Jakir Hussain	d) M.S. Subbulakshmi	M.S. Subbulakshmi
17	Match the following: A. Ashoka — i. Mughal Dynasty B. Akbar — ii. Leader of Indian Independence Movement C. Chandragupta Maurya — iii. Maurya Dynasty D. Mahatma Gandhi — iv. Founder of the Maurya Empire				c
	a) A-i, B-ii, C-ii, D-iv	b) A-ii, B-iv, C-i, D-iii	c) A-iii, B-i, C-iv, D-ii	d) A-i, B-iv, C-iii, D-ii	A-iii, B-i, C-iv, D-ii
18	In which year, Arunachal Pradesh became a full-fledged state of India?				c
	a) 1985	b) 1986	c) 1987	d) 1988	1987
19	Choose the correct statements: A. The Amazon River is the longest river in the world. B. Australia is both a country and a continent. C. Greenland is the smallest island in the world. D. Antarctica is the only continent without a native human population.				a
	a) B and D	b) D only	c) A and C	d) A, B and D.	B and D
20	Which of the following country won Football World Cup maximum times?				c
	a) Argentina	b) Germany	c) Brazil	d) Italy	Brazil
21	How many bits are there in a nibble?				Answer option (c)
	a) 8	b) 16	c) 4	d) 32	c)

22	Match the following:				Answer option (a)

A.	byte	i. small network
B.	Processor	ii. Pixel
C.	LAN	iii. Hz
D.	Small Visual Element	iv. 8 bit

a)	b)	c)	d)	A——-----iv
A——-----iv	A——-----i	A——-----ii	A——-----iii	B——-----iii
B——-----iii	B——-----iii	B——-----i	B——-----iv	C——-----i
C——-----i	C——-----iv	C——-----iv	C——-----ii	D——-----ii
D——-----ii	D——-----ii	D——-----iii	D——-----i	

23	Identify the correct option for the following statements A. SD card is an output device. B. A microphone is used as an input device. C. Microsoft Office is an Application Software. D. A process is a part of hardware in execution.				Answer option (b)

a) A is true and the remaining statements are False.	b) B and C are true but A and D are false.	c) All four statements are false	d) All the four statements are True.	B and C are true but A and D are false.

24	Consider the following two statements and choose the correct options: A: Assertion: Every general-purpose computer must have an Operating System installed on it. B: Justification: Man and Computer cannot communicate directly.				Answer option (a)

a) Both statements A and B are true and B is the correct justification of statement A	b) Both statements A and B are true but B is not a correct justification A	c) Statement A is true but B is False	d) Statement A is false but statement B is true	Both statements A and B are true and B is the correct justification of statement A

25	In the context of digital computer, which of the following pairs of digits is referred to as binary?				Answer option (d)
	a) 1 and 2	b) 3 and 4	c) 4 and 8	d) 0 and 1	0 and 1

26	Which unit of the computer is considered as the brain of the computer?				Answer option (d)
	a) Memory	b) Input Unit	c) Output Unit	d) CPU	CPU

27	PDF stand for				Answer option (a)

	a) Portable Document Format	b) Printable Document File	c) Printable Document Format	d) Portable Document File	Portable Document Format
28	Which of the following is not a part of computer Hardware				Answer option (d)
	a) Hard Disk	b) Monitor	c) Mouse	d)MS Windows	MS Windows
29	In computer terminology, what is the full form of RAM?				Answer option (c)
	a. Repeated Access Memory	b. Rapid Access Memory	c. Random Access Memory	d. Regular Access Memory	Random Access Memory
30	Consider the following two statements and choose the correct option. A: Assertion: HTTP is an application Layer network protocol to transmit hypermedia documents. B: HTTP is designed for communication between web browsers and web servers.				Answer option (b)
	a) Statement A is true but the statement B is false	b) Both statements A and B are true and B is correct justification of A	c) Both statements A and B are true but B is not correct justification of A	d) Both statements A and B are False.	Both statements A and B are true and B is correct justification of A
31	Which of the following statements is/are True A. Google search is a browser B. Python is a programming Language C. Virus is a Malicious Program D. Linux is Word Processing Software				Answer option (d)
	a) A, B and D	a) B, C and D	c) B and D	d) B and C	B and C
32	Match the following: A. CPU — i. Input Unit B. Monitor — ii. Operating System C. Mouse — iii. Computer Brain D. Unix — iv. Output Unit				Answer option (b)
	a) A—----iii B—----i C—----iv D—----ii	b) A—----iii B—----iv C—----i D—----ii	c) A—----i B—----ii C—----iii D—----iv	d) A—----iv B—----iii C—----ii D—----i	A—----iii B—----iv C—----i D—----ii
33	DNS is used for				Answer option (a)
	a)Name resolution	b)IP address mapping	c) address subnetting	d)All of these	Name resolution

34	Consider the following two statements and choose the correct option.				Answer option (c)
	A: Assertion: In Linux, you can create user accounts.				
	B: You can have only one user account on a Linux computer.				
	a) Both statements A and B are true and B is the proper justification of A	b) Statement A is False but Statement B is true.	c) Statement A is true but Statement B is false	d) Both statements A and B are False.	Statement A is true but Statement B is false
35	FTP is a_____ transfer protocol ?				Answer option (b)
	a)hypertext	b)file	c)remote	d)signaling	file
36	Microsoft Windows is a				Answer option (d)
	a) Word Processing Program	b) Database Program	c) Graphics Program	d) Operating System	Operating System

37	Match the following:	Answer option (c)

A MS Word	i Security
B RAM	ii Document
C Browser	iii Internet
D Antivirus	iv Memory

a) A—iii B— i C—ii D— iv	b) A—iii B— i C—ii D— iv	c) A—ii B—iv C—iii D— i	d) A—i B—iv C—iii D— ii	A—ii B—iv C—iii D— i

38	Which of the following is not a desirable Balance Factor value of an AVL tree node				Answer option (d)
	a) -1	b) 0	c) 1	d) None of these	None of these

39	Match sorting algorithm with its basic working principle:	Answer option (b)

A Selection Sort	i) In each iteration, one element is inserted into its correct position ina sorted list.
B Bubble Sort	ii) It merges single element sub lists in a manner that results into a sorted list.
C Insertion sort	iii) It compares adjacent elements and switches their positions if they are out of order.
D Merge Sort	iv) It finds the smallest element in an unsorted array and brings it to the front.

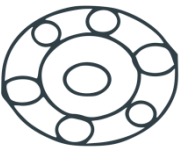|	a) A-ii, B-iii, D-i, C-iv	b) A-iv, B-iii, C-i, D-ii	c) A-ii, B-i, D-iii, C-iv	d) A-iii, B-iv, C-i, D-ii	A-iv, B-iii, C-i, D-ii
40	Following statements for a B Tree of order 'm' are either True or False: A. All the leaf nodes appear on the same level. B. The root node has at least 2 children unless it is a leaf. C. Every node has at most m+1 children. D. A non-leaf node with k children contains k-1 keys. Choose the correct answers from options given below:				Answer option (d)
	a)A and C only	b)B and C only	c)D and C only	d)A, B and D only	A, B and D only
41	Assertion (A): Binary Search is more efficient than Linear Search for large sorted datasets. Justification (B): Binary Search has a time complexity of O(n)				Answer option (c)
	a)Both A and B are true, and B is the correct explanation of A.	b)Both A and B are true, but B is not the correct explanation of A.	c)A is true, but B is false.	d)A is false, but B is true.	A is true, but B is false.
42	If a node having two children is deleted from a binary tree, it is replaced by its _____ .				Answer option (c)
	a) Left Child	b) Right Child	c) In-order successor	d) In-order predecessor	In-order successor
43	A full binary tree with 2n+1 nodes contain				Answer option (d)
	a) n leaf nodes	b) n-1 leaf nodes	c) n+1 non-leaf nodes	d) n non-leaf nodes	n non-leaf nodes
44	The data structure suitable for checking whether an expression contains balanced parenthesis is _____				Answer option (a)
	a) Stack	b) Queue	c) Tree	d) Array	Stack
45	Quartile deviation is given by the formula:				Answer option (a,b,c or d)
	a) Q.D.=Q3+ Q1/2	b) Q.D.= Q3 - Q1	c) Q.D.=(Q3-Q1)/2	d) None of above	a)
46	For a positive skewed distribution, which of the following inequalities holds?				Answer option (a,b,c or d)
	a)Median> mode	b)Mode> mean	c) Mean>median	d)Mean>mode	c) & a)
47	Mode can be calculated from a. Ogive b. Histogram c. Bar diagram d. Pie-chart				Answer option (a,b,c or d)
	a) Ogive	b) Histogram	c) Bar Diagram	d)Pie-chart	b)
48	In a Poisson Distribution, as the mean (average) number of events increases,				Answer option (a,b,c or d)

		a) Distribution becomes bimodal	b) Distribution becomes more concentrated around the mean	c) Distribution becomes negatively skewed	d) The distribution becomes more spread out	b)
49	A distribution with a kurtosis less than 3 is known as					Answer option (a,b,c or d)
		a) Playkurtic	b) Mesokurtic	c) Leptokurtic	d)Hyperkurtic	a)
50	Find the median, mode and mean of 9,5,8,9,9,7,8,9,8.					Answer option (a,b,c or d)
		a) 9,9,9	b) 9,8,9	c) 8,9,8	d) 8,9,9	c)
51	What is the kurtosis of a normal distribution?					Answer option (a,b,c or d)
		a) 0	b) 1	c) 2	d) 3	d)
52	A tautology is a compound statement that is always true regardless of the truth values of its components. A: A tautology is a compound statement that is always true regardless of the truth values of its components. R: A contradiction is a compound statement that is always false regardless of the truth values of its components.					Answer option (d)
		a) A is true, R is true	a) A is false, R is true	c) A is false, R is false	a) A is true, R is false	A is true, R is false
53	Statements: N: Today is Monday. (Atomic proposition) O: I have a meeting. (Atomic proposition) Is the following argument valid? "If today is Monday, then I have a meeting. It is Monday. Therefore, I must have a meeting."					Answer option (b)
		a)Yes, the argument is valid	b)No, the argument commits the fallacy of affirming the consequent	c)No, the argument lacks information about non-Mondays	d)Cannot be determined without a truth table	No, the argument commits the fallacy of affirming the consequent
54	Match the Columns value on the left with correct values on the right: 	A P ∧ Q	i. Neither P nor Q is true
B P ∨ Q	ii P and Q are both true
C ¬(P ∨ Q)	iii P or Q
D P ↔ Q	iv P if and only if Q					Answer option (b)
		b) A-i , B-ii , C-iii, D-iv	b)A-ii , B-iii , C-i, D-iv	c)A-ii , B-iv , C-i, D-iii	d)A-iv , B-ii , C-i, D-iii	A-ii , B-iii , C-i, D-iv
55	P: The population of Hyderabad is more than Delhi. Q: Last year, the number of months with 31 days are 7. A P→Q is True B (P→Q)→Q is False C Q→(P→Q) is False D ¬(P→Q) is True					Answer option (a)

	a) Only A is True	b) Only B is True	c) Both C and D are False	d) Only D is False	Only A is True
56	Statements: P: It is raining today. (Atomic proposition) Q: The library is open. (Atomic proposition) Which of the following statements is logically equivalent to (P ∧ Q) → ¬Q?				Answer option (b)
	a)¬P ∨ Q	b)P → ¬Q	c)¬P ∧ ¬Q	d)P NOR Q	P → ¬Q
57	The statement "If it is raining, then the ground is wet" is a converse statement. A: The converse of "If P, then Q" is "If Q, then P". R: The given statement is the original conditional statement, not the converse.				Answer option (b)
	b) A is true R is false	c) A is true R is true	d) A is false R is true	d) A is false R is false	A is true R is true
58	Statements: E: The cake is ready. (Atomic proposition) F: We can eat dessert. (Atomic proposition) Which of the following statements is the converse of (¬E → ¬F)?				Answer option (a)
	a)E → F	b)¬F → E	c)(E ∨ F) → ¬E	d)¬(E ≡ F)	E → F
59	Multitasking in operating systems allows for:				b
	a) Multiple users to share a single device	b) A single user to perform multiple tasks at one time	c) Devices to run without an OS	d) None of the above	A single user to perform multiple tasks at one time
60	Match the following pairs: 	A.	Windows	1.	Open Source
B.	Linux	2.	Apple
C.	OS-X	3.	Microsoft
D.	Android	4.	Google					c
	a) A-1, B-2, C-3, D-4	b) A-4, B-1, C-2, D-3	c) A-3, B-1, C-2, D-4	d) A-2, B-3, C-4, D-1	A-3, B-1, C-2, D-4
61	Which one of the following is not true? A. Kernel remains in the memory during the entire computer session. B. Kernel is made of various modules which cannot be loaded in running operating system. C. Kernel is the first part of the operating system to load into memory during booting. D. Kernel also contains the implementation of Graphical User Interface.				c
	a) A and B	b) B and D	c) B only	d) C and D	B only

62	Statements: A: Paging helps to prevent fragmentation in memory management. B: Paging divides the memory into fixed-sized blocks called pages, which fit into frames of the same size in physical memory. Which of the following is correct?				a
	a) Both A and B are true, and B is the correct explanation for A.	b) Both A and B are true, but B is not the correct explanation for A.	c) A is true but B is false	d) A is false but B is true	Both A and B are true, and B is the correct explanation for A.
63	A process is:				a
	a) An instance of a program in execution.	b) A set of instructions stored on disk.	c) The same as a thread.	d) A type of computer virus.	An instance of a program in execution.
64	The Banker's algorithm is used for:				b
	a) Detecting deadlocks	b) Preventing deadlocks	c) Memory allocation	d) Process scheduling	Preventing deadlocks
65	In a timeshare operating system, when the time slot assigned to a process is completed, the process switches from the current state to:				c
	a) Suspended state	b) Terminated state	c) Ready state	d) Blocked state	Ready state
66	A process is copied into main memory from the secondary memory according to the requirement.				Answer option (a)
	a) Memory Swapping	b) Threads	c) Fragmentation	d) Segmentation	Memory Swapping
67	Choose the correct answer from the option given below 	List I	List II
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A Switching	I Mutual Exclusion
B Wait signal	II Transition of a process from one state to another.
C Cache	III Principal of Locality
D Deadlock	IV Circular wait					Answer option (b)

	a) A-IV, B-I, C-III, D-II	b)A-II, B-I, C-III, D-IV	c)A-I, B-II, C-III, D-IV	d)A-IV, B-III, C-I, D-II	A-II, B-I, C-III, D-IV
68	Which one of the following errors will be handled by the Operating System?				Answer option (d)
	a) Lack of paper in printer	b) Connection failure in the network	c) Software failure exception	d) All of the above	All of the above
69	Type Questions here for assertion and justification Assertion (A): The operating system functions as a software program facilitating communication and operation between computer hardware and software Reason (R): Windows operating system has recently transitioned to an open-source model.				Answer option (b)
	a)Both A and R are correct and R is correct explanation of (A).	b)Both (A) and (R) are correct and (R) is not the correct explanation of (A).	c)(A) is True but (R) is False.	d)(A)is False but (R) is True.	Both (A) and (R) are correct and (R) is not the correct explanation of (A)
70	Information about the process is maintained in				Answer option (a)
	a) Process control block	b) Stack	c) Program control block	d) Transition lock side buffer	Process control block
71	A systematic procedure for moving a process from one state to another is				Answer option (d)
	a) Synchronization	b) Deadlock	c) Starvation	d)Context Switching	Context Switching
72	Match the list(I) with List(II)				Answer option (b)

A IPC	I Resource allocation
B Demand's Paging	Ii Computational Speedup
C Banker's Algorithm	Iii Task Control Block
D PCB	Iv Virtual Storage

	a)A-II, B-I, C-IV, D-III	b)A-II, B-IV, C-I, D-III	c)A-I, B-II, C-III, D-IV	d)A-II, B-III, C-I, D-IV	b) A-II, B-IV, C-I, D-III
73	The algebraic rule below is known as _____ $$(a \times b) \times c = a \times (b \times c)$$				Answer option b
	a)commutative property of multiplication	b) associative property of multiplication	c) distributive property of multiplication	d) Identity property of multiplication	associative property of multiplication

74	For the polynomial $$x^2 - 2x - 8$$ Which of the following are its factors? A. $(x + 2)$ B. $(x - 2)$ C. $(x + 4)$ D. $(x - 4)$				Answer option d
	a)A only	b) B only	c) A and C only	d) A and D only	A and D only
75	What is the rank of the following matrix? $$\begin{bmatrix} 1 & 2 & 3 \\ 2 & 1 & 4 \\ 3 & 0 & 5 \end{bmatrix}$$				Answer option c
	a) 0	b) 1	c) 2	d) 3	2
76	The value of $log_8 16$ is				Answer option c
	a)$\frac{1}{3}$	b)$\frac{2}{3}$	c)$\frac{4}{3}$	d)$\frac{3}{4}$	$\frac{4}{3}$
77	Consider the simultaneous linear equations below: $$x + 2y - 6 = 0$$ $$x - y - 3 = 0$$ This system has				Answer option b
	a)two solutions	b)one solution	c)no solution	d)infinite number of solutions	one solution
78	Value of the determinant below is _____ $$\begin{vmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{vmatrix}$$				Answer option a
	a) 0	b) 1	c) 2	d) 4	0
79	Consider the following statements about the roots of the quadratic equation $$ax^2 + bx + c = 0$$ A. Sum of roots $= -\frac{b}{a}$ B. Product of roots $= \frac{c}{a}$				Answer option a
	a) Both (A) and (B) are true	b) (A) is false but (B) is true	c) (A) is true but (B) is false	d) Both (A) and (B) are false	Both (A) and (B) are true
80	In the sequence 6, 9, 14, x, 30, 41, a possible value of x is				c)
	a) 25	b)20	c) 21	d) 18	21

8 1	A. Thegiven figure has 9circles. B. The given figure has 7 circles.				a)
	a) A is True	b) B is True	c) None is true	d) Both are true	A is True
8 2	The given figure has how many faces?				c)
	a) 1	b) 4	c) 6	d) 8	6
8 3	**A) Assertion:** The given figure has 8 squares? **B) Justification:** Square has equal sides				c)
	a) A is true	b) B is true	c) Both A and B are True	d) none of these are true	Both A and B are True
8 4	Match the following <table><tr><td>A.</td><td>Brush</td><td>i.Paper</td></tr><tr><td>B.</td><td>Student</td><td>i.Class</td></tr><tr><td>C.</td><td>Keyboard</td><td>i.Paint</td></tr><tr><td>D.</td><td>Pen</td><td>.Computer</td></tr></table>				d)
	a) A-i, B-ii, C-iii, D-iv	b) A-i, B-ii, C-iv, D-iii	c) A-ii, B-i, C-iii, D-iv	d) A-iii, B-ii, C-iv, D-i	A-iii, B-ii, C-iv, D-i
8 5	In a certain code language, "TRUMP" is written as "46321" and "GRAIN" is written as "76598". How is "GRUNT" written in that code language?				b)
	a) 72345	b) 76384	c) 84563	d) 64347	76384
8 6	L, M, N, O and P are sitting in a line facing east. L and M are sitting together. N is sitting at north end and O is sitting at south end. P is the neighbors of M and N. A) Assertion: M is third from north end B) These persons are sitting in a table arrangement.				c)
	a) A is True	b) B is True	c) Both are True	d) None of these are True	Both are True
8 7	If A is any vector with $Ai + Bj + Ck$ then what is the y-axis component of the vector?				a
	a) B units	b) A units	c) C units	d) Square root of a sum of squares of the three, i.e. A, B and C	B units
8 8	The points (-5, 1), (1, p) and (4, -2) are collinear if Choose the correct answer from the given option below				d

	A. p=3 B. p=2 C. p=1 D. p=-1				
	a) A only	b) B only	c) A or B	d) D only	D only

8 9	Choose the correct matching pairs:				c

1.	$(x + y)^2 - (x^2 + y^2) = 0$	A.	Circle
2.	$x^2 + y^2 = r^2$	B.	Two lines
3.	$(x - h)^2 + (y - k)^2 = r^2$	C.	Two parallel lines
4.	$x^2 + y^2 - 2hx - 2ky + c = 0$	D.	Two mutually perpendicular lines

a) 1-A, 2-B, 3-C, 4-D	b) 1-B, 2-C, 3-D, 4-A	c) 1-D, 2-A, 3-A, 4-A	d) 1-D, 2-D, 3-C, 4-B	1-B, 2-C, 3-D, 4-A

9 0	This equation describes a circle: $x^2 + y^2 - 6y = 0$. What is the radius of the circle?				c
	a) 1	b) -2	c) 3	d) 2	3

9 1	Match the following:				b

I. How far from the y-axis is the center of the curve $2x^2 + 2y^2 + 10x - 6y - 55 = 0$?	A. -2.5
II. What is the radius of the circle represented by $x^2 + y^2 - 4x - 6y + 9 = 0$?	B. -3.0
III. What are the coordinates of the center of the ellipse $\frac{x^2}{9} + \frac{y^2}{4} = 1$?	C. (2, -3)
IV. How far from the origin is the center of the hyperbola $\frac{(x-2)^2}{4} - \frac{(y+3)^2}{9} = 1$?	D. 5

a) I-A, II-B, III-C, IV-D	b) I-A, II-D, III-B, IV-C	c) 1-b, 2-a, 3-d, 4-c	d) 1-c, 2-a, 3-b, 4-d	I-A, II-D, III-B, IV-C

9 2	In right handed coordinate system which axis is considered to be positive?				a
	a) The thumb is *z*-axis, fingers curled from *x*-axis to y-axis	b) The thumb is *x*-axis, fingers curled from *z*-axis to *y*-axis	c) The thumb is *y*-axis, fingers curled from *x*-axis to z-axis	d) The thumb is *z*-axis, fingers curled from *y*-axis to *x*-axis	The thumb is *z*-axis, fingers curled from *x*-axis to y-axis

9 3	The values of h for which the equation $3x^2+2hxy-3y^2-40x+30y-75=0$ represents a pair of straight lines, are	a

	a) 4, 4	b) 4, 6	c) 4, - 4	d) 0, 4	4, 4
94	What is the value of $\lim\limits_{\substack{\lim x \to 0 \\ \lim y \to 0}} \dfrac{xy}{x^2+y^2}$?				d)
	a) 0	b) 1	c) -1	d) Limit does not exist	Limit does not exist
95	Consider the following statements and choose the correct option: A. The domain of the function f (x)=2x-1 is(-∞ , ∞) B. The domain of the function f (x)=2x-1 is (0 ,∞)				a)
	a) A is true	b)B is true	c) Both are true	d) None of these	A is true
96	Which of the following statements are true? i) The function x^2+x is an even function ii) The function e^{x^2} is an odd function				d)
	a) i) is true and ii) is false	b) i) is false and ii) is true	c) Both are true	d) Both are false	Both are false
97	Match the following 	Function	Derivative
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A. f(x) =x^2	i.f'(x)=cos(x)
B. f(x)=sin(x)	i.f'(x)= 2x
C. f(x)=f(x)=e^x	i.f'(x)= 1/x
D. f(x)=ln(x)	.f'(x)=e^x					c)
	a)A-i, B-ii, C-iii, D-iv	b)A-i, B-ii, C-iii, D-iv	c)A-ii, B-i, C-iv, D-iii	d)A-i, B-ii, C-iii, D-iv	A-ii, B-i, C-iv, D-iii
98	A. The function |x| isdifferentiable at x = 0 B. The function |x| is not differentiable at x = 0				b)
	a)A is true	b) B is true	c) Both A and B are true	d)none of these true	B is true
99	The local maxima and minima is obtained at A. first derivative B. second derivative				c)
	a)A only	b)B only	c) Both A and B	d)Neither A nor B	Both A and B
100	The value of $\lim\limits_{x \to \infty} \dfrac{Tan\,x}{x}$ is				d
	a) 0	b) 1	c) ∞	d) Does not exist	Does not exist