Discipline	Computer Application			
S. No.	Question	Answer1	Answer2	Answer3	Answer4
1	What is size of void in bytes?	1	2	4	0
2	If a function is friend of a class, which one of the following is wrong?	A function can only be declared a friend by a class itself.	Friend functions are not members of a class, they are associated with it.	Friend functions are members of a class.	It can have access to all members of the class, even private ones
3	Which of the followings are true about constructors? 1. A class can have more than one constructor. 2. They can be inherited. 3. Constructors cannot be declared in protected section of the class. 4. Constructors cannot return values	Only 1,2,4	1,2,3	1,3,4	1,2,3,4
4	Which of the following data constraints would be used to specify that the value of cells in a column must be one of a specific set of possible values ?	A domain constraint	A range constraint	An intrarelation constraint	An interrelation constraint
5	A heterogeneous distributed database is which of the following:	The same DBMS is used at each location and data are not distributed across all nodes.	The same DBMS is used at each location and data are distributed across all nodes.	A different DBMS is used at each location and data are not distributed across all nodes.	A different DBMS is used at each location and data are distributed across all nodes
6	A relation is in this form if it is in BCNF and has no multivalued dependencies	second normal form.	third normal form.	fourth normal form.	domain/key normal form.
7	In a 7-node directed cyclic graph, the number of Hamiltonian cycles is to be	728	450	360	260
8	According to pigeon hole principle if k+1 or more objects are put in k boxes, then at least one box contains	two or more objects.	k objects	none objects	k+1 objects
9	Which of the following statement is false?	Arrays are dense lists and static data structure	data elements in linked list need not be stored in adjacent space in memory	pointers store the next data element of a list	linked lists are collection of the nodes that contain information part and next pointer
10	With what data structure can a priority queue be implemented?	Array	List	Heap	Tree
11	The physical location of a record is determined by a mathematical formula that transforms a file key into a record location is :	B-Tree File	Hashed File	Indexed File	Sequential file.

#	Question	(a)	(b)	(c)	(d)
12	Which of the following propositions is tautology?	(p v q)→q	p v (q→p)	p v (p→q)	Both (b) & (c)
13	How many types of sequential circuits are there?	2	3	4	5
14	Convert the binary number 1011010 to hexadecimal	5C	5A	5F	5B
15	A grammar that produces more than one parse tree for some sentence is called	Ambiguous	Unambiguous	Regular	None of the mentioned
16	Grammar of the programming is checked at _____ phase of compiler.	Semantic analysis	Syntax analysis	Code optimization	Code generation
17	A system program that set up an executable program in main memory ready for execution is	assembler	linker	loader	text-editor
18	The interval from the time of submission of a process to the time of completion is termed as _____	waiting time	turnaround time	response time	throughput
19	If the size of logical address space is 2 to the power of m, and a page size is 2 to the power of n addressing units, then the high order _____ bits of a logical address designate the page number, and the ____ low order bits designate the page offset.	m, n	n, m	m − n, m	m − n, n
20	Which part of the UNIX operating system interacts with the hardware?	Kernel	Shell	vi editor	application program
21	Components used for interconnecting dissimilar networks that use different communication protocols.	Switches	Gateways	Routers	Bridges
22	Two broad categories of congestion control are	Open-loop and Closed-loop	Open-control and Closed-control	Active control and Passive control	Active loop and Passive loop
23	In public key cryptosystem which is kept as public?	Encryption keys	Decryption keys	Encryption & Decryption keys	None of the mentioned
24	The spiral model has two dimensions namely _____ and _____	diagonal, angular	radial, perpendicular	radial, angular	diagonal, perpendicular
25	Coupling is a qualitative indication of the degree to which a module	can be written more compactly	focuses on just one thing	is able to complete its function in a timely manner	is connected to other modules and the outside wo
26	What kind of architecture does mobile computing deploy?	Two layered	Three layered	Four layered	None of the above
27	Which of the following is not a data mining functionality?	Characterization and Discrimination	Classification and regression	Selection and interpretation	Clustering and Analysis

28	Which application we will use to make program more portable?	WindowsAPI	WindowApp	MFC	None of these
29	The most essential and basic header files that windows programming support:	windef.h	winnt.h	winbase.h	All of these
30	Transition function maps.	$\Sigma * Q \to \Sigma$	$Q * Q \to \Sigma$	$\Sigma * \Sigma \to Q$	$Q * \Sigma \to Q$
31	A Deterministic Pushdown Automaton is a PDA in which:	No state p has two outgoing transitions	More than one state can have two or more outgoing transitions	Atleast one state has more than one transitions	None of the mentioned
32	Finite state machine are not able to recognize Palindromes because:	Finite automata cannot deterministically find the midpoint	Finite automata cannot remember arbitarily large amount of data	Even if the mid point is known, it cannot find whether the second half matches the first	All of the mentioned
33	An interrupt breaks the execution of instructions and diverts its execution to	Interrupt service routine	Counter word register	Execution unit	control unit
34	A machine language instruction format consists of	Operand field	Operation code field	Operation code field & operand field	none of the mentioned
35	In Bresenham's algorithm, while generating a circle , it is easy to generate?	One octant first and other by successive reflection	One octant first and other by successive rotation	One octant first and other by successive translation	All octants
36	The transformation that is used to alter the size of an object is	Scaling	Rotation	Translation	Reflection
37	In which of the following cases n-queen problem does not exist	n=5 and n=7	n=4 and n=6	n=2 and n=3	n=4 and n=8
38	_____ is the class of decision problems that can be solved by non-deterministic polynomial algorithms?	NP	P	Hard	Complete
39	Which of the following definitions correctly defines the State-space in an AI system?	A state space can be defined as the collection of all the problem states	A state space is a state which exists in environment which is in	A state space is the total space available for the agent in the state	All of the above
40	"The application of a rule never prevents the later application of another rule", is a characteristic of	Monotonic Production System	Non - monotonic Production System	Commutative Production system	None of the above

Ph.d. Entrance test
Subject: Computer Applications
Answer Key

Question No.	Correct Answer	Question No.	Correct Answer
1.	D	21.	B
2.	C	22.	A
3.	C	23.	A
4.	A	24.	C
5.	D	25.	D
6.	C	26.	B
7.	C	27.	C
8.	A	28.	A
9.	C	29.	D
10.	D	30.	D
11.	B	31.	A
12.	C	32.	D
13.	A	33.	A
14.	B	34.	C
15.	A	35.	A
16.	B	36.	A
17.	C	37.	C
18.	B	38.	A
19.	D	39.	A
20.	A	40.	A