## Computer Based Examination System

Exported On *	2022/06/27 11:50:30
Title *	Question Paper Answer Key
OES Exam *	GPSC08202110 / Assistant Professor in Computer Engineering/ Completed / 2022-06-26

1 Question Description	<pre>#include <sys types.h=""> #include <stdio.h> #include <unistd.h> int main() {     pid t pid;     /* fork a child process */     pid = fork();     if (pid &lt; 0) { /* error occurred */     fprintf(stder, "Fork Failed");     return 1;     }     else if (pid == 0) { /* child process */     excelp("/bin/ls";".NULL);     printf("LINE J");     }     else { /* parent process */     /* parent will wait for the child to complete */     wait(NULL);     printf("Child Complete");     }     return 0; } Evaluate the circumstances under which the line of code marked printf("Line I") is executed?</unistd.h></stdio.h></sys></pre>
	Explain the circumstances under which the line of code marked printf( "Line J") is executed?
Α	Never
В	If ls is successfully executed

	с	If child process is created successfully
	D	When child process becomes Zombie
	E	None of the above
	Correct Answer	A
	Marks	1
2	Question Description	The interval between the time of submission and completion of the job is called
	Α	Turnaround time
	В	Waiting time
	с	Throughput
	D	Response time
	E	None of the above
	Correct Answer	A
	Marks	1

Question Description	How would you configure a RESTful URL parameter that supports a search for a book based on its ID?
Α	GET /{id}/books/
В	GET /books/{id}
С	GET /book?id={id}
D	GET /books?id={id}
E	None of the above
Correct Answer	B
Marks	1
Question Description	Which of the join operations do not preserve non matched tuples?

Α	Left outer join
В	Right outer join
С	Inner join
D	Natural join
E	None of the above
Correct Answer	C
Marks	1

5	Question Description	A formula is said to be a 3-CF-formula if it is a conjunction(i.e. ,an AND)of clauses, and each clause has at most 3 literals. Analogously, a formula is said to be a 3-DF-formula if it is adisjunction(i.e. an OR) of clauses of at most 3 literals each. Define the languages 3-CF-SAT and 3-DF-SAT as follows: $3-CF-SAT=\{\Phi \Phi \text{ is a } satisfiable 3-CF-formula\}$ $3-DF-SAT=\{\Phi \Phi \text{ is a } satisfiable 3-DF-formula\}$ Which of the following best represents our current knowledge of these languages?
	A	Both 3-CF-SAT and 3-DF-SAT are NP-complete
	В	Both 3-CF-SAT and 3-DF-SAT are in P
	c	Both 3-CF-SAT and 3-DF-SAT are in NP but only 3-DF-SAT is NP-complete
	D	Both 3-CF-SAT and 3-DF-SAT are in NP but only 3-CF-SAT is NP-complete C
	E	None of the above
	Correct Answer	C
	Marks	1

6	Question Description	Point out the correct statement.
	A	Platforms can be based on specific types of development languages, application frameworks, or other constructs
	В	SaaS is the cloud-based equivalent of shrink-wrapped software
	С	Software as a Service (SaaS) may be described as software that is deployed on a hosted service
	D	All of the mentioned
	E	None of the above
	Correct Answer	D
	Marks	1
7	Question Description	Logistic regression is aregression technique that is used to model data having a outcome.
	Α	Linear, binary
	В	Linear, numeric
	С	Nonlinear, binary
	D	Nonlinear, numeric
	E	None of the above
	Correct Answer	C
	Marks	1

Question Description	Which of the following logic families is well suited for high-speed operations?
A	TTL
В	ECL
С	MOS
D	CMOS
E	None of the above
Correct Answer	В
Marks	1
Question Description	What is the main disadvantage of spinlocks?
Α	they are not sufficient for many process
В	they require busy waiting
с	they are unreliable sometimes
D	they are too complex for programmers
E	None of the above
Correct Answer	В
Marks	1
	A B C C C C C C C C C C C C C C C C C C

0	Question Description	Which operator has highest priority:
	Α	()
	В	[]
	с	$\rightarrow$
	D	
	E	None of the above
	Correct Answer	A
	Marks	1
11	Question Description	Virtual Machine Ware (VMWare) is an example of :
	Α	Infrastructure as a Service
	В	Platform as a Service
	С	Software as a Service
	D	SMS Gateway as a Service
	E	None of the above
	Correct Answer	A
	Marks	1

2	Question Description	There are n unsorted arrays: A1, A2,,An. Assume that n is odd. Each of A1, A2,, An contains n distinct elements. There are no common elements between any two arrays. The worst-case time complexity of computing the median of the medians of A1, A2,,An is
	Α	O(nlogn)
	В	O(n)
	C	O(n^2)
	D	O(n^2logn)
	E	None of the above
	Correct Answer	c
	Marks	1

<sup>13</sup> Question Description	How many processes are created using the following code excluding main()?
	for(inti=0; i <n; fork();<="" i++)="" th=""></n;>
A	2 <sup>n</sup>
В	2 <sup>n</sup> -1
с	$n^2$
D	2n
E	None of the above
Correct Answer	B
Marks	1

14	Question Description	Consider the following C code segment:
		a = b + c; e = a + 1; d = b + c; f = d + 1; g = e + f;
		In a compiler, this code segment is represented internally as a directed acyclic graph (DAG). The number of nodes in the DAG is
	Α	6
	В	12
	С	7
	D	10
	E	None of the above
	Correct Answer	A
	Marks	1

5	Question Description	COCOMO stands for
	A	Consumed Cost Model
	В	Common Cost Model
	с	Constructive Cost Model
	D	Composition Cost Model
	E	None of the above
	Correct Answer	C
	Marks	1

16		Consider the following expression grammar for G: E->E-T T T->T+F F F->(E) id Which of the following grammars is not left recursive but is equivalent to G?
		E->TE' E'->-TE' E T->T+F F F->(E) id
		E->TX X->-TX € T->FY Y->+FY € F->(E) id
		$E \rightarrow E - T T$ $T \rightarrow T + F F$ $F \rightarrow (E) id$
		$\begin{array}{l} E->TX (TX)\\ X->-TX +TX  \notin\\ T->id \end{array}$
	E	None of the above
	Correct Answer	B
	Marks	1

17		Consider the following code segment: If (a>b) F1(); Else { If(a>c) F2(); Else F3(); } The cyclomatic complexity for the above code is:
	Α	2
	В	3
	С	4
	D	5
	E	None of the above
	Correct Answer	В
	Marks	1

10		
18	Question Description	Given data: 4, 8, 9, 15, 21, 21, 24, 25, 26, 28, 29, 34. After partitioning the above data into 3 equi-depth bins and smoothing by using bin means, the floor value of mean of the bin means is:
		After partitioning the above data into 5 equi-deput bins and smoothing by using bin means, the noor value of mean of the bin means is.
	Α	23
	В	29
	С	20
	D	25
	E	None of the above
	Correct Answer	С
	Marks	1
19	Question Description	is a widely used and effective machine learning algorithm based on the idea of bagging.
	Α	Apriori Algorithm
	В	
	D	DBSCAN Algorithm
	С	Agglomerative Clustering Algorithm
	D	Random Forest Algorithm
	E	None of the above
	Correct Answer	D
	Marks	1

20	Question Description	If the initial value of semaphore s is 8, on performing 6 wait(s) and 2 signal(s) operations, the value of semaphore becomes
	Α	7
	В	2
	с	10
	D	12
	E	None of the above
	Correct Answer	A
	Marks	1
21	Question Description	A relation r(A,B) in a relational database has 1800 tuples. The attribute A has integer values ranging from 6 to 20, and the attribute B has integer values ranging from 1 to 20. Assume that the attributes A and B are independently distributed. The estimated number of tuples in the output of $\sigma_{ A>10 V B=18 }(r)$ is:
	Α	800
	В	1230
	с	1200
	D	900
	Е	None of the above
	Correct Answer	В
	Marks	1
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22	Question Description	The total number of hypervisors are:
	A	1
	В	2
	С	3
	D	4
	E	None of the above
	Correct Answer	В
	Marks	1
23	Question Description	Which traversal technique lists the nodes of a binary search tree in ascending order:
	Α	Post-order
	В	In-order
	с	Pre-order
	D	Linear order
	E	None of the above
	Correct Answer	В
	Marks	1

24	Question Description	Which is the desirable property of decomposition?
	Α	Partition constraint
	В	Dependency preservation
	C	Redundancy
	D	Security
	E	None of the above
	Correct Answer	B
	Marks	1
25	Question Description	CTRL + c is used for
	A	Interrupting the running process
	В	Terminating the running process
	С	Stopping the terminal
	D	Terminating the running process with core dump
	E	None of the above
	Correct Answer	A
	Marks	1

26	Question Description	Assume a demand paged memory system where only three pages can reside in the memory at a time. The following sequence gives the order in which the program references the pages:
		1,1,3,3,4,2,2,4
		Assume that least frequently used page is replaced when necessary. If there is more than one least frequently used page then the least recently used page among them is replaced. During the program's execution, how many times will the pages 1,2,4 brought to the memory?
	Α	1,2,1 times respectively
	В	1,1,1 times respectively
	С	2,1,2 times respectively
	D	1,1,2 times respectively
	E	None of the above
	Correct Answer	D
	Marks	1

27	Question Description	In a certain operating system, deadlock prevention is attempted using the following scheme. Each process is assigned a unique timestamp, and is restarted with the same timestamp and is restarted with the same timestamp if killed. Let Ph be the process holding a resource R, and T(Ph) and T(Pr) be their timestamps respectively. The decision to wait or pre-empt one of the process is based on the following algorithm: If( $T(Ph) < T(Pr)$ ) Kill Pr Else wait Which of the following is true?
	Α	The scheme is not deadlock, but starvation-free
	В	The scheme is bothdeadlock-free and starvation-free
	С	The scheme is deadlock free, but not starvation-free
	D	The scheme is neither deadlock-free nor starvation-free
	E	None of the above
	Correct Answer	C
	Marks	1

28	Question Description	A computer on a 10Mbps network is regulated by a token bucket. The token bucket is filled at a rate of 2Mbps. It is initially filled to capacity with 16Megabits. What is the maximum duration for which the computer can transmit at the full 10Mbps?
	Α	1.6 seconds
	В	2 seconds
	с	5 seconds
	D	8 seconds
	E	None of the above
	Correct Answer	B
	Marks	1
29	Question Description	Which one of the following in place sorting algorithms needs the minimum number of swaps?
	Α	Quick sort
	В	Insertion sort
	с	Selection sort
	D	Heap sort
	E	None of the above
	Correct Answer	D
	Marks	1

30	Question Description	The ability to invoke a RESTful method multiple times without changing the state of the server on subsequent invocations is known as:
	Α	Idempotence
	В	Immutability
	С	Statefulness
	D	Uniformity
	E	None of the above
	Correct Answer	A
	Marks	1

31	Question Description	Consider a simple checkpointing protocol and the following set of operations in the log: Start(t1), Write (t1,y,2,3), Start t2, Commit t1, Write t2,z,5,7 Checkpoint; Start t3; write t3,x,1,9; commit t3; start t4; write t4,z,7,2
	A	Undo: None, Redo: t3,t1,t4,t2
	В	Undo: t4,t2,t1, Redo: t3
	С	Undo: t2,t4, Redo: t3
	D	Undo : t4, t2, Redo: t3,t1
	E	None of the above
	Correct Answer	C
	Marks	1

32	Question Description	An Internet Service Provider(ISP) has the following chunk of CIDR-based IP addresses available with it:245.248.128.0/20. The ISP wants to give half of this chunk of addresses to Organization A, and a quarter to Organization B, while retaining the remaining with itself. Which of the following is a valid allocation of addresses to A and B?
	A	245.248.136.0/21 and 245.248.128.0/22
	В	245.248.128.0/21 and 245.248.128.0/22
	С	245.248.132.0/22 and 245.248.132.0/21
	D	245.248.136.0/22 and 245.248.132.0/21
	E	None of the above
	Correct Answer	A
	Marks	1
33	Question Description	The of a counting semaphore indicates the number of processes in the blocked state.
	A	Positive value
	В	Negative value
	С	The magnitude of negative value
	D	The sign (+/-) of value
	D E	The sign (+/-) of value None of the above
	-	
	E	None of the above

34	Question Description	.Let R be a relation with schema R(P,Q,R1, R2,R3) and S be a relation with S(P,Q,S1,S2) where {P,Q} is the key for both schemas. Which of the following queries are equivalent? $1.\Pi_p(R) \bowtie \Pi_p(S)$ $2.\Pi_p(R \bowtie S)$ $3.\Pi_p(\Pi_{p,q}(R) - (\Pi_{p,q}(R) - \Pi_{p,q}(S))$ $4.\Pi_p(\Pi_{p,q}(R) \cap \Pi_{p,q}(S))$
	Α	Only 1,2,3
	В	Only 2,3,4
	С	Only 1,3,4
	D	Only 1,4
	E	None of the above
	Correct Answer	В
	Marks	1

5 Q	uestion Description	The number of processes in memory is called
A	<b>A</b>	Degree of parallel processing
В	3	Degree of multiprocessing
С	;	Degree of multitasking
D	)	Degree of multithreading
E		None of the above
С	Correct Answer	c
N	larks	1

Question Description	Consider the following relational schemes for a library database:
	Book (Title, Author, Catalog_no, Publisher, Year, Price)
	Collection (Title, Author, Catalog_no)
	With the following functional dependencies:
	Title Author  Catalog_no
	Catalog_no   Title Author Publisher Year
	Publisher Title Year  Price
	Assume {Author, Title} is the key for both schemes.
	Which of the following statements is true?
А	Both Book and Collection are in BCNF
В	Both Book and Collection are in 3 NF only
с	Book is in 2 NF and collection is in 3NF
D	Both Book and Collection are in 2NF only
E	None of the above
Correct Answer	С
Marks	1

37	Question Description	Which of the following is not TRUE?
	A	Processes may send signals to each other
	В	kill command is to cause immediate program termination.
	с	A field is updated in the signal table when the signal is sent
	D	Each signal is maintained by a single bit
	E	None of the above
	Correct Answer	C
	Marks	1
38	Question Description	Consider the following intermediate program in three address code p = a - b q = p * c p = u * v q = p + q Which one of the following corresponds to a static single assignment from the above code:
	A	p1 = a - b q 1 = p1 * c p1 = u * v q1 = p1 + q1
	В	p3 = a - b q4 = p3 * c p4 = u * v q5 = p4 + q4

C	p 1 = a - b q1 = p2 * c p3 = u * v q2 = p4 + q3
D	p1 = a - b q1 = p * c p2 = u * v q2 = p + q
E	None of the above
Correct Answer	В
Marks	1

39	Question Description	On a system using multilevel feedback queues, a totally CPU-bound process requires 80 units to execute. If the first queue uses a time quantum of 5, and at each level the time quantum doubles, the process will be interrupted times.
	A	three
	В	four
	С	five
	D	six
	E	None of the above
	Correct Answer	В
	Marks	1
40	Question Description	Which model assumes that systems are created from reusable components, scripting or database programming?
	Α	An application-composition model
	В	A post-architecture model
	С	A reuse model
	D	An early design model
	E	None of the above
	Correct Answer	A
	Marks	1

41	Question Description	Which of the following are introduced to reduce the overheads caused by the log-based recovery?
	Α	Checkpoints
	В	Indices
	С	Deadlocks
	D	Locks
	E	None of the above
	Correct Answer	A
	Marks	1
42	Question Description	Updating the value of the view
	Α	Will affect the relation from which it is defined
	В	Will not change the view definition
	С	Will not affect the relation from which it is defined
	D	Cannot determine
	E	None of the above
	Correct Answer	A
	Marks	1

A         View           B         Commit           Commit         Commit           Commit         Rollback           D         Rollback           E         None of the above           Correct Answer         C           Market         Conscience           View         Conscience           Market         Conscience <t< th=""><th>43</th><th>Question Description</th><th>In case of any shut down during transaction before commit which of the following statement is done automatically?</th></t<>	43	Question Description	In case of any shut down during transaction before commit which of the following statement is done automatically?
C       Allock         D       Relback         B       Note of the above         Correct Answer       C         Marks       C         V       Consider a long-lived TCP session with an end-to-end bandwidth of 1 Gbps (- 109 bits-per-second). The session starts with a sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number can be used again is		Α	View
P       Analysis         F       Subscience         Correct Answer       C         Marks       1         V       Subscience         Subscience       Subscinte         Subscin		В	Commit
B         Ane of the above           Correct Answer Marks         C           Correct Answer Marks         C           Correct Answer         C           A         Onsider a long-lived TCP session with an end-to-end bandwidth of 1 Gbps (= 109 bits-per-second). The session starts with a sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number can be used again is		С	Rollback
Correct Answer       C         Marks       C         44       Ouestion Description         A       Consider a long-lived TCP session with an end-to-end bandwidth of 1 Gbps (= 109 bits-per-second). The session starts with a sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number can be used again is         A       A         A       A         B       A         J       A         A       A         B       A     <		D	Flashback
Marks       1         44       Question Description       Consider a long-lived TCP session with an end-to-end bandwidth of 1 Gbps (= 109 bits-per-second). The session starts with a sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number can be used again is		E	None of the above
44       Question Description       Consider a long-lived TCP session with an end-to-end bandwidth of 1 Gbps (= 109 bits-per-second). The session starts with a sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number can be used again is         A       34         B       4         C       43         D       89         E       None of the above         Answer       A		Correct Answer	C
A       34         B       4         C       43         D       89         E       None of the above         Correct Answer       A		Marks	1
A       34         B       4         C       43         D       89         E       None of the above         Correct Answer       A			
B4C33D89ENon of the aboveCorrect AnswerA	44		sequence number of 1234. The minimum time (in seconds, rounded to the closest integer) before this sequence number can be used
C       43         D       89         E       None of the above         Correct Answer       A		A	34
D       89         E       None of the above         Correct Answer       A		В	4
E     None of the above       Correct Answer     A		С	43
Correct Answer     A		D	89
		E	None of the above
Marks 1		Correct Answer	A
		Marks	1

45	Question Description	Limitation of semaphore is
	A	Priority inversion
	В	Deadlock
	с	track all calls to wait and to signal
	D	all the mentioned
	E	None of the above
	Correct Answer	D
	Marks	1
46	Question Description	Point out the wrong statement:
	Α	Some hypervisors are installed over an operating system and are referred to as type 2 or hosted VM.
	В	All CPU's support virtual machines
	С	On a type 2 VM, a software interface is created that emulates the devices with which a system would normally interact
	D	All of the mentioned
	E	None of the above
	Correct Answer	В
	Marks	1

Question Description	How many threads execute at the same time in the system having following configuration: Architecture: x86_64 CPU op-mode(s): 32-bit, 64-bit Byte Order: Little Endian CPU(s): 8 On-line CPU(s) list: 0-7 Thread(s) per core: 2 Core(s) per socket: 4 Socket(s): 1 NUMA node(s): 1 Vendor ID: GenuineIntel CPU family: 6 Model: 42 Stepping: 7 CPU MHz: 6600.000 BogoMIPS: 6784.46 Virtualization: VT-x Lid cache: 32K L2 cache: 256K L3 cache: 8192K NUMA node0 (PU(s): 0-7
Α	8
В	4
с	2
D	16
E	None of the above
Correct Answer	Λ
Marks	

Question Description	Consider three concurrent processes P1, P2 and P	3 as shown below, which	ch access a sl	hared variab		1145 00		1200 10 100.	
		P1	P2	P3					
		•							
			•	•					
		• D=D+20	D= D-50	D= D+10					
		•	•	•					
			•	•					
			•	•					
	The processes are executed on a uniprocessor syst		ed operating		e minim	um an	nd maxim	um possible v	lues of D after t
A	The processes are executed on a uniprocessor syst three processes have completed execution are X a 40		red operating the value of		ne minin	num an	ıd maxim	um possible va	lues of D after t
A B			red operating the value of		ne minin	num an	nd maxim	um possible va	lues of D after t
	40		red operating the value of		ne minin	num an	nd maxim	um possible va	lues of D after t
В	40 60		ed operating the value of		ne minin	ium an	nd maxim	um possible va	lues of D after t
B C	40 60 20		ed operating the value of		ne minin	ium an	nd maxim	um possible va	lues of D after t
B C D	40 60 20 30		ed operating the value of		ne minin	ium an	nd maxim	um possible va	lues of D after t

49	Question Description	
-		Which statement is not correct about "init" process in Unix?
	Α	It is generally the parent of the login shell.
	В	It has PID 1.
	С	It is the first process in the system.
	D	Init forks and execs a tty' process at every port connected to a terminal
	E	None of the above
	Correct Answer	c
	Marks	1
50	Question Description	DML is provided for
	Α	Description of the logical structure of a database.
	В	The addition of new structures in the database system.
	С	Manipulation & processing of the database.
	D	Definition of a physical structure of the database system.
	E	None of the above
	Correct Answer	C
	Marks	1
51		

Comprehension	Read the Passage Below and answer the following questions:
	From the very beginning man has attempted what has seemed impossible. Man is different from the rest of the creation in this respect. He has an eternal thirst for adventure. This has led to countless new discoveries and inventions. Human curiosity is limitless. This has led to space flights and moon landings. The desire to know what is beyond the visible world takes many forms. The Everest hero Tenzing and the hero of the 'Seven Seas', Mihir Sen, were inspired by the same restless spirit. Astronauts Armstrong, Collins and Aldrin, who were the first humans to set foot on the soil of the moon, have proved beyond doubt that man shall not rest until he has conquered the entire universe. But, is it enough to know and master nature? Which is more important: knowing and understanding the world around or knowing and understanding yourself? In the absence of self-knowledge, the most advanced knowledge of the universe is not only useless but dangerous.
Question Description	From the options provided below, identify the phrase that does not describe the innate nature of human kind, as per the passage
A	eternal thirst for knowledge
В	countless new discoveries and inventions
С	desire to know what is beyond the visible world
D	restless spirit
E	None of the above
Correct Answer	В
Marks	1

<sup>52</sup> Comprehension	Read the Passage Below and answer the following questions:
	From the very beginning man has attempted what has seemed impossible. Man is different from the rest of the creation in this respect. He has an eternal thirst for adventure. This has led to countless new discoveries and inventions. Human curiosity is limitless. This has led to space flights and moon landings. The desire to know what is beyond the visible world takes many forms. The Everest hero Tenzing and the hero of the 'Seven Seas', Mihir Sen, were inspired by the same restless spirit. Astronauts Armstrong, Collins and Aldrin, who were the first humans to set foot on the soil of the moon, have proved beyond doubt that man shall not rest until he has conquered the entire universe. But, is it enough to know and master nature? Which is more important: knowing and understanding the world around or knowing and understanding yourself? In the absence of self-knowledge, the most advanced knowledge of the universe is not only useless but dangerous.
Question Description	The passage indicates that mankind differs from other living species in
Α	the thirst for adventure
R	

В	self-knowledge
С	the desire to conquer the universe
D	attempting the impossible
E	None of the above
Correct Answer	D
Marks	1

Comprehension	Read the Passage Below and answer the following questions:
	From the very beginning man has attempted what has seemed impossible. Man is different from the rest of the creation in this respect. He has an eternal thirst for adventure. This has led to countless new discoveries and inventions. Human curiosity is limitless. This has led to space flights and moon landings. The desire to know what is beyond the visible world takes many forms. The Everest hero Tenzing and the hero of the 'Seven Seas', Mihir Sen, were inspired by the same restless spirit. Astronauts Armstrong, Collins and Aldrin, who were the first humans to set foot on the soil of the moon, have proved beyond doubt that man shall not rest until he has conquered the entire universe. But, is it enough to know and master nature? Which is more important: knowing and understanding the world around or knowing and understanding yourself? In the absence of self-knowledge, the most advanced knowledge of the universe is not only useless but dangerous.
Question Description	Read the following statements and arrange them in a logical sequence in line with the tone of the passage (i) In the absence of self-knowledge, it is also dangerous (ii) Knowing and understanding yourself is more important (iii)The most advanced knowledge of the universe is useless (iv) Knowing and understanding the world around is important
Α	(i); (ii); (iii) ;(iv)
В	(iv); (ii);(iii);(iv)
с	(iii); (i); (ii) ;(iv)
D	(ii); (iv); (iii) ;(i)
E	None of the above
Correct Answer	В

Marks	1

54	Comprehension	Read the Passage Below and answer the	e following questions:
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From the very beginning man has attempted what has seemed impossible. Man is different from the rest of the creation in this respect. He has an eternal thirst for adventure. This has led to countless new discoveries and inventions. Human curiosity is limitless. This has led to space flights and moon landings. The desire to know what is beyond the visible world takes many forms. The Everest hero Tenzing and the hero of the 'Seven Seas', Mihir Sen, were inspired by the same restless spirit. Astronauts Armstrong, Collins and Aldrin, who were the first humans to set foot on the soil of the moon, have proved beyond doubt that man shall not rest until he has conquered the entire universe. But, is it enough to know and master nature? Which is more important: knowing and understanding the world around or knowing and understanding yourself? In the absence of self-knowledge, the most advanced knowledge of the universe is not only useless but dangerous.

Question Description	In the passage what is described as boundless
Α	the desire to know
В	the universe
С	the restless spirit
D	human curiosity
E	None of the above
Correct Answer	D
Marks	1

55	Comprehension	Read the Passage Below and answer the	following questions:

From the very beginning man has attempted what has seemed impossible. Man is different from the rest of the creation in this respect. He has an eternal thirst for adventure. This has led to countless new discoveries and inventions. Human curiosity is limitless. This has led to space flights and moon landings. The desire to know what is beyond the visible world takes many forms. The Everest hero Tenzing and the hero of the 'Seven Seas', Mihir Sen, were inspired by the same restless spirit. Astronauts Armstrong, Collins and Aldrin, who were the first humans to set foot on the soil of the moon, have proved beyond doubt that man shall not rest until he has conquered the entire universe. But, is it enough to know and master nature? Which is more important: knowing and understanding the world around or knowing and understanding yourself? In the absence of self-knowledge, the most advanced knowledge of the universe is not only useless but dangerous.

Question Description	From the options provided, select the antonym of the word "restless", in the sense implied in the passage
Α	peace loving
В	calm
С	contentious
D	eager
E	None of the above
Correct Answer	В
Marks	1

56	Question Description	Maruti Suzuki Installs Asia's largest 20 MWp carport type Solar Plant at which state?
	Α	Haryana
	В	Maharashtra
	С	Rajasthan
	D	Punjab
	E	None of the above
	Correct Answer	A
	Marks	1
57	Question Description	B. C. Roy Award is given in the field of
	A	Music
	В	Journalism
	с	Medicine
	D	Environment
	E	None of the above
	Correct Answer	C
	Marks	1

58	Question Description	The world's first wildlife conservation bond Has been issued by the World Bank for which animal?
	A	White elephant
	В	Black Rhinoceros
	с	Asiatic Lion
	D	Bengal Tiger
	E	None of the above
	Correct Answer	В
	Marks	1
59	Question Description	What is the name of the eBook launched by the Income Tax Department?
	A	Amrutwani
	В	Pratidhwani
	с	Aatmnirbhar
	D	Kiyaverse
	E	None of the above
	Correct Answer	В
	Marks	1

60	Question Description	Baikho festival is celebrated in which state?
	A	Manipur
	В	Nagaland
	С	Tripura
	D	Assam
	E	None of the above
	Correct Answer	D
	Marks	1
61	Question Description	World Veterinary Day is being celebrated on which date?
	Α	April 29
	A B	April 29 April 28
	В	April 28
	B C	April 28 April 30
	B C D	April 28 April 30 April 27
	B C D E	April 28   April 30   April 27   None of the above

62	Question Description	Who was the first Indian Chief of Army Staff of the Indian Army ?
	A	Gen. K.M. Cariappa
	В	Vice-Admiral R.D. Katari
	С	Gen. Maharaja Rajendra Singhji
	D	Gen. Vishit Singh
	E	None of the above
	Correct Answer	A
	Marks	1
63	Question Description	India has recently launched its first COVID-19 vaccine for animals. What is the name of vaccine?
	A	Petcovax
	В	Anocovax
	С	Creacovax
	D	Armacovax
	E	None of the above
	Correct Answer	В
	Marks	1

64	Question Description	Who among the following has recently been appointed ambassador of Indo-UK culture platform?
	A	Sonu Nigam
	В	Arijit Singh
	С	Shankar Mahadevan
	D	AR Rahman
	E	None of the above
	Correct Answer	D
	Marks	1
65	Question Description	Tap to pay for UPI' is a new functionality launched by which platform?
	A	Google Pay
	В	PhonePe
	С	BHIM App
	D	Paytm
	E	None of the above
	Correct Answer	A
	Marks	1

66	66 Question Description	Find out the wrong number in the given sequence of numbers.
		105, 85, 60, 30, 0, -45, -90
	Α	0
	В	85
	С	-45
	D	60
	E	None of the above
	Correct Answer	A
	Marks	1
67	Question Description	On what dates of April, 2001 did Wednesday fall?
		1 <sup>st</sup> , 8 <sup>th</sup> , 15 <sup>th</sup> , 22 <sup>nd</sup> , 29 <sup>th</sup>
		2 <sup>nd</sup> , 9 <sup>th</sup> , 16 <sup>th</sup> , 23 <sup>rd</sup> , 30 <sup>th</sup>
	С	3 <sup>rd</sup> , 10 <sup>th</sup> , 17 <sup>th</sup> , 24 <sup>th</sup>
	D	4 <sup>th</sup> , 11 <sup>th</sup> , 18 <sup>th</sup> , 25 <sup>th</sup>
	E	None of the above
	Correct Answer	D
	Marks	1

68     Question Description     Find the missing Numbers.					
		38	54	61	7 <b>9</b>
		21	?	12	24
		19	09	14	?
	A	18, 46			
	_				
	В	28, 51			
	С	42, 62			
	D	18, 44			
	E	None of	of the	above	
	Correct Answer	D			
	Marks	1			

69	Question Description	Direction: In each of the following question, there is a certain relationship between two given pair on both side of '::' . One word is given on another side of '::' while another word is to be found from the given options, having the same relation with this word as the words of the given pair . Choose the correct word from the following options. Tectonics : Building : : Taxidermy : ?
	A	Classification
	В	Conserving
	c	Stuffing
	D	Collecting
	E	None of the above
	Correct Answer	C
	Marks	1

<sup>0</sup> Qu	estion Description	January 1, 2008 is Tuesday. What day of the week lies on Jan 1, 2009?
Α		Monday
в		Wednesday
С		Thursday
D		Sunday
E		None of the above
Co	rrect Answer	C
Ма	rks	1

71	Question Description	Read the following information carefully and answer the questions given beside.
		Certain number of persons is standing in a linear row facing towards the north. Information about few of them is given here. T stands third to the left of G, who is sixth to the right of A. 7 persons stand between B and T, where T is somewhere to the left of B. 3 persons stand between D and B, who is second to the left of the one who is fourth from the right end. Only 4 persons stand between U and C. 3 persons stand to the right of C, which is half the number of persons standing to the left of T.
		What is the position of T with respect to U?
	Α	2nd to the right
	В	7th to the left
	c	5th to the left
	D	3rd to the left
	E	None of the above
	Correct Answer	C
	Marks	1

72	Question Description	Following questions are based upon the word series given below. DEN, RAT, EAR, OWL, CUB If all the letters in all the words are arranged in reverse alphabetical order(within the word), then which of the following words can be formed using first letter of first word from left end, second letter of second word from right end and first letter of second word from left end?
	Α	BOT
	В	ATN
	С	NOT
	D	TEN
	E	None of the above
	Correct Answer	C
	Marks	1

73	Question Description	In a family of 7 persons, there are only 3 females and three married couples. Each child has both the parents alive. The family members – A,B,C,D,E,F and G spent certain amounts in a month. B is the only son of G, who spent the third highest amount. A is not a female and spent an amount just lower than D's husband. C is the father of two children of different genders one of them is D. E's mother-in-law was the third highest spender. F is the aunt of A and spent the highest amount. The spendings of E were just lower than A's uncle, who spent the fourth highest amount. C spent Rs. 4500, which is the second highest amount to be spent. How is the second highest spender related to the second lowest spender?
	A	Father
	В	Maternal grandfather
	С	Paternal Uncle
	D	Can't be determined
	E	None of the above
	Correct Answer	В
	Marks	1

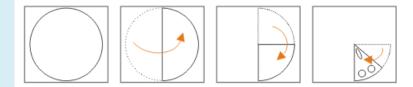
## **Question Description**

Α

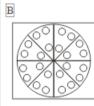
В

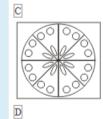
С

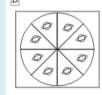
In the question, a piece of paper is folded and cut as shown below in the questions figures. From the given option figures, which one indicates how it will appear when opened.











А

В

С

<sup>75</sup> Q		A train can travel 50% faster than a car. Both start from point A at the same time and reach point B 75 kms away from A at the same time. On the way, however, the train lost about 12.5 minutes while stopping at the stations. The speed of the car is:
A		100 kmph
в		110 kmph
С		120 kmph
D		130 kmph
E		None of the above
С	orrect Answer	С
Μ	arks	1