



भारत संचार निगम लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT SANCHAR NIGAM LIMITED

(A Govt. of India Enterprise)

Recruitment Branch

BSNL Corporate Office, Room no: 223,
2nd Floor, Eastern Court, New Delhi-110001

No. 12-2/2018-Rectt

Dated: 01/02/2019

To

**All Chief General Managers
Telecom Circles, BSNL,**

**Sub: -LICE JTO (T) VY-2016-17, held on 20.01.2019 --- Provisional Answer Key
reg...**

With the approval of competent authority, please find here with enclosed the provisional answer key for the aforesaid LICE.

"Any queries/discrepancy/grievance in the provisional answer key may be submitted on the GRIEVANCE PORTAL available on the home page of registration module i.e. <https://bsnlexamsjto2018-19.onlineregistrationform.org/BSNLJT/>.

This grievance portal will remain open wef 01.02.2019 to 08.02.2019 (Mid night) and No such grievance will be entertained by any other means.

Encl-As above

Mai
01/02/19

Rajiv Rajvanshi)

Asstt. General Manager (Rectt.-IV)

PART-A							
qp	Question	Option-1	Option-2	Option-3	Option-4	Correct option	
1	Both Rangesh _____ Pintoo are guilty.	or	and	as well as	too	and	GE
2	Which state has the largest area in India?	Uttar Pradesh	Madhya Pradesh	Maharashtra	Rajasthan	Rajasthan	
2	भारत में किस राज्य का क्षेत्रफल सबसे बड़ा है?	उत्तर प्रदेश	मध्य प्रदेश	महाराष्ट्र	राजस्थान	राजस्थान	
3	We had better _____.	sleeps	sleeping	to sleep	sleep	sleep	GE
4	_____ boy in green dress is my son.	The	A	An	None of these	the	GE
5	_____ this time of the year the mountains are usually covered with ice.	During	At	On	In	During	GE
6	Correct pair of the state and its capital is	Nagaland - Shillong	Jharkhand - Ranchi	Uttarakhand - Nainital	Chhattisgarh - Bilaspur	Jharkhand - Ranchi	
6	राज्य और उसकी राजधानी का सही जोड़ा है	नागालैंड - शिलॉंग	झारखंड - रांची	उत्तराखंड - नैनीताल	छत्तीसगढ़ - बिलासपुर	झारखंड - रांची	
7	A paper written in one's own handwriting.	Transcript	Scroll	Manuscript	Parchment	Manuscript	GE
8	Kusum has a ten _____ note.	rupee	rupee's	rupees'	rupees	rupee	GE
9	Which of the following Indian state is not a producer of Tea?	Assam	Kerala	West Bengal	Chhattisgarh	Chhattisgarh	
9	निम्न में से कौन सा भारतीय राज्य चाय का उत्पादक नहीं है?	असम	केरल	पश्चिम बंगाल	छत्तीसगढ़	छत्तीसगढ़	
10	PNG (Piped Natural Gas) is used for	Mining	Welding	Anesthesia	Cooking	Cooking	
10	पीएनजी (पाइप द्वारा पहुंचाई गई प्राकृतिक गैस) का इस्तेमाल _____ के लिये होता है।	खनन	वैलडिंग	बेहोशी	खाना बनाने	खाना बनाने	
11	Which one of the following Metals is used to heat up the electric iron?	Copper	Tungsten	Nichrome	Tin	Nichrome	
11	निम्न में से कौन सी धातु का इस्तेमाल विद्युत प्रैस को गरम करने के लिये होता है?	ताँबा	टंगस्टन	निक्रोम	टिन	निक्रोम	
12	_____ is the crop which produced mostly in India?	Wheat	Jwar	Maize	Rice	Rice	
12	_____ की फसल भारत में ज्यादातर उत्पन्न होती है?	गेहूँ	ज्वार	मकई	चावल	चावल	
13	Chemical energy is converted into electric energy in	Dynamo	Electric Fan	Battery	Atom Bomb	Battery	
13	_____ में रसायनिक ऊर्जा विद्युत ऊर्जा में बदलती है।	डायनमो	विद्युत पंखा	बैट्री	परमाणु बम्ब	बैट्री	
14	Which Indian company has been selected as offset partner in Rafale deal?	Reliance Defense	Reliance Telecom	HAL	BPL	Reliance Defense	
14	कौन सी भारतीय कम्पनी राफेल डील में ऑफसेट साथी के रूप में चुनी गई है?	रिलायंस डिफेंस	रिलायंस टेलीकॉम	एचएएल	बीपीएल	रिलायंस डिफेंस	
15	Which is the highest peak in India?	Kamet	Nandakot	Nanda Devi	K-2 (Godwin Austin)	K-2 (Godwin Austin)	
15	भारत में कौन सी चोटी सबसे ऊंची है?	कामेत	नंदकोट	नंदादेवी	के-2 (गॉडविन ऑस्टिन)	के-2 (गॉडविन ऑस्टिन)	
16	Admit means	Decide	Accept	Realise	Commit	Accept	GE
17	A person who rules without consulting the opinion of others.	Democrat	Bureaucrat	Autocrat	Fanatic	Autocrat	GE
18	Find the missing number (?) in the series: 11, 20, 38, 74, ?	146	154	128	132	146	
18	11, 20, 38, 74, ? श्रृंखला में लुप्त संख्या (?) को ढूँढें?	146	154	128	132	146	
19	They _____ dancing for two hours.	did	is	have been	has been	have been	GE
20	The driest part of India is	Western Rajasthan	Jammu and Kashmir	Gujarat	Madhya Pradesh	Western Rajasthan	
20	भारत का सबसे सूखाग्रस्त हिस्सा है	पश्चिमी राजस्थान	जम्मू और कश्मीर	गुजरात	मध्य प्रदेश	पश्चिमी राजस्थान	

21	Through which light can not pass.	Dark	Opaque	Obscure	pull	Opaque	GE
22	A ____ man was trembling.	drunk	drink	drunken	None of these	drunken	GE
23	Hertz is the unit of	Frequency	Wavelength	Intensity	Clarity of waves	Frequency	
23	हर्टज ____ की इकाई है।	आवृत्ति	तरंग की लम्बाई	तीव्रता	तरंगों की स्पष्टता	आवृत्ति	
24	RADAR is used to	locate submerged submarines	receive signal from radio receivers	detect and locate distance objects	locate geostationary satellites	detect and locate distance objects	
24	रेडार का इस्तेमाल होता है	डूबी हुई पनडुब्बी को खोजने के लिये	रेडियो रिसीवर से संकेत पाने के लिये	दूर की वस्तुओं का पता लगाने और खोजने के लिये	भू-स्थिर उपग्रहों को खोजने के लिये	दूर की वस्तुओं का पता लगाने और खोजने के लिये	
25	____ Ganga is a holy river.	The	A	An	None of these	The	GE
26	It may _____ heavily.	rain	rained	rains	have rained	rain	GE
27	In terms of area, India is _____ largest nation in the World.	Second	Fourth	Sixth	Seventh	Seventh	
27	क्षेत्रफल के हिसाब से, भारत विश्व में _____ सबसे बड़ा राष्ट्र है।	दूसरा	चौथा	छठा	सातवाँ	सातवाँ	
28	The teacher was pleased _____ Sanjay.	with	at	for	on	with	GE
29	It is ____ useless pen.	the	a	an	None of these	a	GE
30	Who is the Union Minister for Water Resources?	Sushma Swaraj	Nitin Gadkari	Arun Jaitley	Piyush Goel	Nitin Gadkari	
30	जल संसाधन के लिये केंद्रीय मंत्री कौन है?	सुषमा स्वराज	नितिन गडकरी	अरुण जेटली	पियुष गोयल	नितिन गडकरी	
31	The substance having infinite electric resistance is called	Conductor	Insulator	Resistor	Electrolyte	Insulator	
31	पदार्थ जिसमें अनन्त विद्युत प्रतिरोध होता है वह कहलाते हैं	चालक	कुचालक	प्रतिरोधक	इलेक्ट्रोलाइट	कुचालक	
32	They may ___ there tomorrow.	goes	go	went	gone	go	GE
33	It is ___ one-rupee note.	an	the	a	None of these	a	GE
34	Diamond is Harder than Graphite because of	difference of layers of atom	tetrahedral structure of diamond	difference of crystalline structure	None of these	difference of crystalline structure	
34	हीरा कालासीसा से कठोर ____ के कारण होता है।	परमाणु की परतों में भिन्नता	हीरे का चतुष्फलकीय आकृति	क्रिस्टलीय आकृति में भिन्नता	इनमें से कोई भी नहीं	क्रिस्टलीय आकृति में भिन्नता	
35	Our soldiers were better trained _____ of enemies.	than those	than	than that	those	than those	GE
36	Rebate means	Loss	Compensation	Refund	Discount	Discount	GE
37	Smoke of tobacco is injurious to Health because it contains	Carbon Monoxide	Nicotine	Polycyclic Hydro carbon	Methylene	Nicotine	
37	तम्बाकू का धुआँ सेहत के लिये हानिकारक है क्योंकि इसमें सम्मिलित है	कार्बन मोनोऑक्साइड	निकोटिन	पोलीसाइक्लिक हाईड्रो कार्बन	मिथाइलिन	निकोटिन	
38	How many odd numbered pages are there in a book of 1089 pages?	542	545	544	546	545	
38	1089 पृष्ठों की एक किताब में विषम पृष्ठों की संख्या कितनी है?	542	545	544	546	545	
39	Who is the new Chief Justice of India?	Ranjan Kohli	K M Joseph	Ranjan Gogoi	Dipak Mishra	Ranjan Gogoi	
39	भारत का नया मुख्य न्यायाधीश कौन है?	रंजन कोहली	के एम जोसेफ	रंजन गोगोई	दीपक मिश्रा	रंजन गोगोई	
40	Obscene means	Unwanted	Unhealthy	Dirty	Indecent	Indecent	GE
41	Which of the following state is the largest wheat producing state in India?	Punjab	Uttar Pradesh	Madhya Pradesh	Haryana	Uttar Pradesh	
41	भारत में निम्न में से कौन सा राज्य सबसे अधिक मात्रा में गेहूँ उत्पन्न करता है?	पंजाब	उत्तर प्रदेश	मध्य प्रदेश	हरियाणा	उत्तर प्रदेश	
42	Where is Lakshdweep Island located?	Bay of Bengal	Arabian Sea	Indian Ocean	None of these	Arabian Sea	

42	लक्षद्वीप टापू कहां स्थित है?	बंगाल की खाड़ी	अरब सागर	भारतीय सागर	इनमें से कोई भी नहीं	अरब सागर	
43	He ____ his examination next year.	took	will take	was take	taking	will take	GE
44	Find the odd one that does not belong to the group	Geometry	Mathematics	Trigonometry	Algebra	Mathematics	
44	समूह से जो अलग है उसका पता लगाओ	रेखागणित	गणित	त्रिकोणमिति	बीजगणित	गणित	
45	I _____ you a letter last month.	has sent	have sent	send	sent	sent	GE
46	Statue of Unity is built in the memory of	Mahatma Gandhi	Sardar Vallabh Bhai Patel	Jawaharlal Nehru	Veer Sawarkar	Sardar Vallabh Bhai Patel	
46	एकता की प्रतिमा ____ की याद में बनी है।	महात्मा गांधी	सरदार वल्लभ भाई पटेल	जवाहरलाल नेहरू	वीर सावरकर	सरदार वल्लभ भाई पटेल	
47	Adversity means	Crisis	Failure	Misfortune	Helplessness	Misfortune	GE
48	He is ____ expert.	the	a	an	None of these	an	GE
49	The brown puppies are the youngest ____ the lot.	for	among	out	by	among	GE
50	If Bow: Arrow, then Pistol : ?	Gun	shoot	Bullet	Rifle	Bullet	
50	अगर धनुष: तीर, तब तमंचा : ?	बंदूक	मारना	गोली	राइफल	गोली	

q.no	Question	Option-1	Option-2	Option-3	Option-4	Correct Option
1	The entire hostname has a maximum of	31 characters	63 characters	127 characters	255 characters	255 characters
2	SPC stands for	Standard	Stored Program	Signaling	Signaling	Stored Program
3	A linear collection of data elements where the linear node is given by means of pointer is called	Linked list	Node list	Primitive list	None of these	Linked list
4	A bubbled NAND gate is equivalent to a	OR gate	NAND gate	NOR gate	XOR gate	OR gate
5	What is the change in the value of transmitted power when the modulation index changes from 0 to 1	100%	Remains unchanged	50%	80%	50%
6	A dynamometer Wattmeter can be used for	Both D.C and A.C	D.C only	A.C only	Any of the Above	Both D.C and A.C
7	From the point of view of safety, the resistance of earthing electrode should be	Low	High	Medium	It does not affect the safety	Low
8	Which of the following devices translates hostnames into IP addresses?	DNS Server	Hub	DHCP Server	Firewall	DNS Server
9	Bit at position zero is usually referred to	Local Bit	Least Significant Bit (LSB)	Most significant Bit (MSB)	Least Significant Byte	Least Significant Bit (LSB)
10	Object is ____ abstraction	Object	Logical	Real	Hypothetical	Real
11	Intrinsic semiconductors are those which	Are available locally	Are made of the semiconductor material in its purest form	Have more electrons than holes	Have zero energy gaps	Are made of the semiconductor material in its purest form
12	A synchronous satellite orbits the earth once in	24 hours	12 hours	6 hours	1 hour	24 hours
13	A byte consists of	1 bit	4 bits	8 bits	16 bits	8 bits
14	The X-OR and X-NOR gates can have how many inputs?	2	1	4	Any number	2
15	What will be the result of following expression in JavaScript? "5+2+'1'"	8	undefined	71	521	71
16	Association among several entities is called	Extraction	Relationship	Combination	Association	Relationship
17	In the IPv4 addressing format, the number of networks allowed under Class C addresses is	2 ¹⁴	2 ⁷	2 ²¹	2 ²⁴	2²¹
18	What is the function of a modem?	Encryption and decryption	Converts data to voice	Converts analog signals to digitals and vice-versa	Serve as a hardware antivirus	Converts analog signals to digitals and vice-versa
19	The main function of interpoles is to minimize ____ between the brushes and the commutator when the d.c. machine is loaded.	Sparking	Friction	Current	Wear and tear	Sparking
20	What is the programming style of the object oriented conceptual model?	Invariant relationships	Algorithms	Classes and objects	Goals, often expressed in a predicate calculus	Classes and objects
21	What is an exception?	Problem arising during compile time	Problem arising during runtime	Problem in syntax	Problem in IDE	Problem arising during runtime
22	Which term is used to describe communication where a piece of information is sent from one or more points to a set of other points?	Unicast	Broadcast	Multicast	None of these	Multicast
23	Which of the following is a transport layer protocol?	DNS	HTTP	TCP	ARP	TCP
24	When the primary winding of a transformer is connected to a dc supply	It will draw small current	Primary leakage reactance is increased	Core losses are increased	Primary winding may burn out	Primary winding may burn out
25	In C programming language, which of the following operator has the highest precedence?	Unary +	*	>=	==	Unary +
26	A 16-square K-map eliminates	2 variables	3 variables	4 variables	8 variables	4 variables
27	Nickel-Cadmium batteries are preferred than Lead-Acid batteries in military applications because	these can be easily charged and discharged	their discharge rate is higher	they deliver large amount of power	All of these	All of these
28	The forbidden energy gap for germanium is	03 eV	35 eV	07 eV	112 eV	07 eV
29	____ control signals are used to initiate the data transfer between peripherals and DMA.	DREQ & DACK	HOLD & HLDA	IOR & IOW	OCW & ICW	DREQ & DACK
30	Which bridge is utilized in signal conditioning circuits for balancing purpose?	Maxwell Bridge	Wheatstone Bridge	Wein Bridge	Kelvin Bridge	Wheatstone Bridge
31	Apogee means	The point farthest from earth	The point nearest from earth	The point smallest from earth	None of these	The point farthest from earth
32	Which of the following is not the type of Pop-up boxes available in JavaScript?	Warning	Confirm	Alert	Prompt	Warning
33	Which is not a part of refrigerator?	Compressor	Thermostat switch	Door Lamp switch	Bucholz relay	Bucholz relay
34	A transistor may be used as a switching device or as a	variable resistor	fixed resistor	rectifier	tuning device	variable resistor

35	Which transmission media has the highest transmission speed in a network?	Coaxial cable	Twisted pair cable	Optical fiber	Electrical cable	Optical fiber
36	_____ is concerned with realizing a software design using an object-oriented programming language.	Object oriented analysis	Object oriented methods	Object oriented design	Object oriented programming	Object oriented programming
37	For a beam of light traveling through media of two different densities, if the angle of incidence is greater than the critical angle, _____ occurs.	Reflection	Refraction	Incidence	Criticism	Reflection
38	Which of the following has S.I unit as Hertz?	Charge	Force	Frequency	Power	Frequency
39	Push pull amplifier circuits is used as	Power amplifier	Audio amplifier	RF Amplifier	None of these	Power amplifier
40	Which of the following command in DOS is not an external command?	format	copy	debug	None of these	copy
41	Bank's ATM facility is an example of	LAN	WAN	Mixed networking	Multipurpose networking	WAN
42	Digital Voltmeter (DVM) are measuring instruments that convert	Analog voltage into digital readout	Digital voltage into analog signal	Both option-1 & option-2	None of these	Analog voltage into digital readout
43	Noise Factor (F) and Noise Figure (NF) are related as	$NF = 10 \log_{10}(F)$	$F = 10 \log_{10}(NF)$	$NF = 10(F)$	$F = 10(NF)$	$NF = 10 \log_{10}(F)$
44	Which of the following data model describes how the data is actually stored?	Internal model	External model	Logical model	None of these	Internal model
45	The number of address lines and data lines of 8086 are	16 and 20	16 and 16	8 and 16	20 and 16	20 and 16
46	In an analog data acquisition system, the output signal is captured using	CRO	Plotter	Recorder	Voltmeter	Recorder
47	The pattern of printed lines on most products are called	Price	OCR	Scanner	Bar codes	Bar codes
48	The SQL command _____ is used to withdraw privileges on specific user accounts.	REMOVE	REVOKE	ROLE	GRANT	REVOKE
49	NMI stands for	nonmaskable	nonmultiple	nonmovable	nonmemorable	nonmaskable interrupt
50	Bus, ring and star topologies are mostly used in	LAN	MAN	WAN	Internetwork	LAN
51	The most important feature of CMOS family of ICs is	High speed	Small size	Low power consumption	Low input impedance	Low power consumption
52	What is the purpose of back up protection?	To increase the speed	To increase the reach	To leave no blind spot	To guard against failure of primary	To guard against failure of primary
53	Direction of rotation of motor is determined by	Faraday's law	Lenz's law	Coulomb's law	Fleming's left-hand rule	Fleming's left-hand rule
54	The number of cells in a 6-variable K-map is	6	12	36	64	64
55	Sound waves do not travel through	Solids	Liquids	Gases	Vacuum	Vacuum
56	In Calorimetric method large amount of the RF power is measured by converting into	heat	vapour	AF power	None of these	heat
57	Finding the location of the element with a given value is	Traversal	Search	Sort	None of these	Search
58	A Database Management System (DBMS) is	Collection of programs to access data	Collection of data describing one particular enterprise	Collection of interrelated data	All of these	All of these
59	A 32 bit microprocessor has the word length equal to	2 bytes	1 byte	4 bytes	8 bytes	4 bytes
60	Which failure includes the case of deadlock or resource unavailability?	Transaction failure	System Crash	Disk Failure	None of these	Transaction failure
61	The highest decimal number that can be represented with 10 binary digits, is	512	1023	1024	256	1023
62	What are the advantages of arrays?	Easier to store elements of same data type	Used to implement other data structures like stack and queue	Convenient way to represent matrices as a 2D array	All of these	All of these
63	A program written in machine language	is easy to understand and modify	runs more slowly than a program written in high level language	both option-1 and option-2	None of these	None of these
64	Which multiplexing technique transmits digital signals?	TDM	FDM	WDM	Both TDM and FDM	TDM
65	A latch is commonly used to	interface input devices	interface output devices	interface memory	interface DMA	interface output devices
66	The current drawn by the armature of DC motor is directly proportional to	Torque	Speed	The voltage across the terminals	Cannot be determined	Torque
67	Which of the following frequency range represent audible frequency range of human?	Below 20 Hz	20 Hz - 20 kHz	Above 20 kHz	All of these	20 Hz - 20 kHz
68	Which among the following can restrict class members to get inherited?	Private	Protected	Public	All three	Private
69	The Instruction pointer (IP) is _____ bits in length.	4	16	8	32	16
70	Viruses, Trojan horses and worms are	Able to harm computer system	Unable to detect if present on computer	User-friendly applications	Harmless applications resident on computer	Able to harm computer system

71	What is the main purpose of a communications system?	To have a frequency assignment	For modulation	To provide an acceptable replica of the information at the destination	None of these	To provide an acceptable replica of the information at the destination
72	When determining the efficiency of algorithm the time factor is measured by	Counting microseconds	Counting the number of key operations	Counting the number of statements	Counting the kilobytes of algorithm	Counting the number of key operations
73	ASCII code is a	5-bit code	7-bit code	8-bit code	10-bit code	7-bit code
74	_____ is a portion in a communications system, which processes the information so that it becomes suitable to the characteristic of the transmission medium.	Encoder	Modulation	Transmitter	Multiplexer	Transmitter
75	What is the function of an operating system?	Manages computer's resources very efficiently	Takes care of scheduling jobs for execution	Manages the flow of data and instructions	All of these	All of these
76	The ability of the receiver to select the wanted signals among the various incoming signals is termed as	Sensitivity	Selectivity	Stability	None of these	Selectivity
77	What is the relation in degrees of the electric and magnetic fields in an electromagnetic wave?	180°	90°	270°	45°	90°
78	The D-flip-flop has _____ inputs.	1	2	3	4	1
79	The Central Processing Unit (CPU) in a computer consists of	Input, output and processing	Control unit, primary storage and secondary storage	Control unit, arithmetic logic unit and registers	None of these	Control unit, arithmetic logic unit and registers
80	The gain stability of an amplifier circuit can be improved by using	positive feedback	negative feedback	both positive and negative feedback	None of these	negative feedback
81	Which of the following is not type of class?	Abstract Class	Final Class	Start Class	String Class	Start Class
82	In data-flow diagram, _____ shows the direction of data flow and their name describing the data flowing along that path.	rounded rectangle	rectangles	circles	arrows	arrows
83	IMUL is a signed	Addition	Subtraction	Multiplication	Division	Multiplication
84	When a program is abnormally terminated, the equivalent of a _____ command occurs.	Commit	Rollback	Quit	Exit	Rollback
85	At any given time in an intrinsic piece of semiconductor material at room temperature	electrons drift randomly	holes are created	recombination occurs	All of these	All of these
86	Commonly used refrigerant in commercial ice plant is	CO ²	Freon 12	Air	Ammonia	Ammonia
87	Which of the following methods is used to shield a dynamometer type wattmeter against stray fields?	Meter components are made of non-magnetic materials	Meter is housed in a soft iron case	Neutral wire connection is provided	Meter is earthed	Meter is housed in a soft iron case
88	In PM the information is transmitted using	Change in frequency	Change in amplitude	Change in phase of the carrier	None of these	Change in phase of the carrier
89	Amplitude modulation is	Change in amplitude of the carrier according to amplitude of the modulating signal	Change in frequency of the carrier according to modulating signal	Change in amplitude of the modulating signal according to carrier signal	Change in amplitude of the carrier according to modulating signal frequency	Change in amplitude of the carrier according to amplitude of the modulating signal
90	The memory which does not lose its content on failure of power supply is known as _____ memory.	Main memory	Volatile memory	Non-volatile memory	RAM	Non-volatile memory
91	Which of the following can be represented with a multivalued attribute?	Age	Skill	Birthplace	None of these	Skill
92	Compiler can diagnose	Grammatical errors only	Logical errors only	Grammatical and logical errors	None of these	Grammatical errors only
93	The operation of processing each element in the list is known as	Sorting	Merging	Inserting	Traversal	Traversal
94	Abstraction can apply to	Control and data	Only data	Only control	Classes	Control and data
95	Static RAM chips consists essentially of	Flip-flops	Capacitors	Diodes	None of these	Flip-flops
96	The example of output device is	CRT display	7-segment LED	Printer	All of these	All of these
97	K-map is an abstract form of _____ diagram organized as a matrix of squares.	Block	Venn	Triangle	Cycle	Venn
98	Linked lists are not suitable for the implementation of	Insertion sort	Radix sort	Polynomial manipulation	Binary search	Binary search

99	Which aggregate function gives the arithmetic mean for the specific column?	COUNT	AVG	MIN	SUM	AVG
100	_____ is a measure of the intensity of sound in comparison to another sound intensity.	Phon	Decibel	Pascal	Watts	Decibel