

BSNL JTO Exam Paper 2005

When a piece of copper and another of germanium are cooled from room temperature to 800 K then the resistance of -

- a) Each of them increases
- b) Each of them decreases
- c) Copper increases and germanium decreases
- d) Copper decreases and germanium increases

Answer: d)

When a signal of 10 mV at 75 MHz is to be measured then which of the following instrument can be used -

- a) VTVM
- b) Cathode ray oscilloscope
- c) Moving iron voltmeter
- d) Digital multimeter

Answer: b)

When a sample of germanium and [silicon](#)

having same impurity density are kept at room temperature then –

- a) Both will have equal value of resistivity
- b) Both will have equal value negative resistivity
- c) Resistivity of germanium will be higher than that of silicon
- d) Resistivity of silicon will be higher than that of germanium

Answer: d)

When an RC driving point impedance function has zeros at $s = -2$ and $s = -5$ then the admissible poles for the function would be –

- a) $s = 0$; $s = -6$
- b) $s = 0$; $s = -3$
- c) $s = 0$; $s = -1$
- d) $s = -3$; $s = -4$

Answer: b)

For the n-type semiconductor with $n = N_p$ and $p =$, the hole concentration will fall below the intrinsic value because some of the holes –

- a) drop back to acceptor impurity states
- b) drop to donor impurity states
- c) Virtually leave the crystal
- d) recombine with the electrons

Answer: d)

The location of lightning arrestor is –

- a) Near the transformer
- b) Near the circuit breaker

- c) Away from the transformer
- d) None

Time constant of an RC circuit increases if the value of the resistance is –

- a) Increased
- b) Decreased
- c) Neither a nor b
- d) Both a and b

Answer: a)

Telemetry is a method of –

- a) Counting pulses sent over long distances
- b) Transmitting pictures from one place to another
- c) Transmitting information concerning a process over a distance
- d) None

Answer: c)

When the gauge factor of a strain gauge is 2, stress is 1050 kg/cm², $Y = 2.1 \times 10^6$ kg/cm² and R is 100 ohms then the value of DR will be -

- a) 2W
- b) 3W
- c) 4W
- d) 1W

Answer: d)

As the drain voltage is increased for a junction FET in the pinch off region then the drain current –

- a) Becomes zero
- b) Abruptly decreases
- c) Abruptly increases
- d) Remains constant

Answer: d)

11. One of the following, which is not a transducer in the true sense, is –

- a) Thermocouple
- b) Piezoelectric pick up
- c) Photo-Voltaic cell
- d) LCD

Answer: d)

When a transistor is required to match a 100W signal source with a high impedance output circuit then the connection that would be used is –

- a) Common base
- b) Common collector
- c) Common emitter

d) Emitter follower

Answer: a)

In a JFET gates are always –

a) forward biased

b) reverse biased

c) unbiased

d) none

Answer: c)

The main factor which differentiate a DE MOSFET from an E only MOSFET is the absence of –

a) insulated gate

b) electrons

c) channel

d) P-N junction

An SCR conducts appreciable current when –

a) Anode and gate are both negative with respect to cathode

b) Anode and gate are both positive with respect to cathode

c) Anode is negative and gate is positive with respect to cathode

d) Gate is negative and anode is positive with respect to cathode

Silicon is not suitable for fabrication of light emitting diodes because it is -

a) An indirect band gap semiconductor

b) A direct band gap semiconductor

c) A wide band gap semiconductor

d) A narrow band gap semiconductor

An average responding rectifier type electronic ac voltmeter has its scale calibrated in terms of the rms value of a sine wave, when a square wave voltage of peak magnitude 100V is measured using this voltmeter then the reading indicated by the meter, will be –

a) 111V

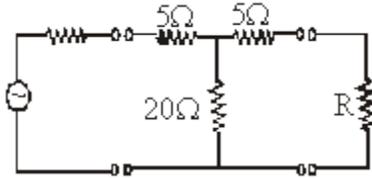
b) 100V

c) 90.09V

d) 70.7V

Answer: b)

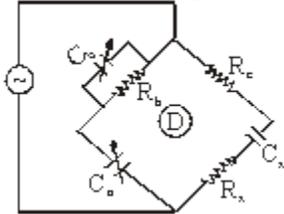
When a four terminal T network is inserted between a source and load resistance as shown in figure then the resistance seen by the source remain the same with or without the four terminal block when R is –



- a) 5W
- b) 10 W
- c) 15 W
- d) 20 W

Answer: a)

In the ac bridge shown in the given figure, the value of R_x and C_x at balance will be



a. $R_x = \frac{C_b}{C_a} R_c$, $C_x = \frac{R_b}{R_c} C_a$

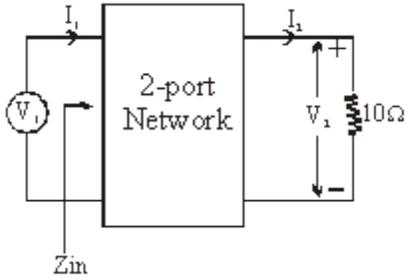
Answer:

Which one of the following conditions for Z parameters would hold for a two port network containing linear bilateral passive circuit elements –

- a) $Z_{11} = Z_{22}$
- b) $Z_{12}Z_{21} = Z_{11}Z_{22}$
- c) $Z_{11}Z_{12} = Z_{22}Z_{21}$
- d) $Z_{12} = Z_{21}$

Answer: d)

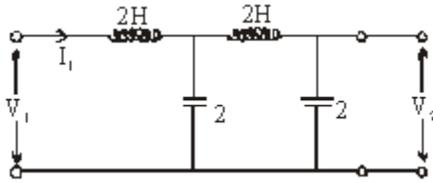
When the transmission parameters of the following network are $A = C = 1$, $B = 2$ and $D = 3$ then the value of Z_{in} is –



a. $\frac{12}{13} \Omega$

Answer:

The value of G_{12} or v_2/v_1 for the circuit shown in the fig. is -



Answer: d. $\frac{1}{16s^4 + 12s^2 + 1}$

The two port network of the fig. shown has open circuit impedance parameters given by matrix -

Answer: a. $\begin{bmatrix} R & R \\ R & R \end{bmatrix}$

While calculating R_{th} , constant current sources in the circuit are -

- a) replaced by opens
- b) replaced by 'shorts'
- c) treated in parallel with other voltage sources
- d) converted into equivalent voltage sources

Answer: a)

Maxwell's loop current method of solving electrical networks -

- a) uses branch currents
- b) utilizes kirchhoff's voltage law
- c) is confined to single-loop circuits
- d) is a network reduction method

Answer: b)

A transmission line of characteristic impedance $Z_0 = 50$ ohms, phase velocity $V_p = 2 \times 10^8$ m/s and length $l = 1$ m is terminated by a load $Z_L = (30 - j40)$ ohms. The input impedance of the line for a frequency of 100 MHz will be

- a) $(30 + j40)$ ohms
- b) $(30 - j40)$ ohms
- c) $(50 + j40)$ ohms
- d) $(50 - j40)$ ohms

Answer: b)

For an elliptically polarized wave incident on the interface of a dielectric at the Brewster angle then the reflected wave will be-

- a) Elliptically polarized
- b) Linearly polarized
- c) Right circularly polarized
- d) Left circularly polarized

Answer: b)

A yagi antenna has a driven antenna-

- a) Only
- b) With a reflector
- c) With one or more directors
- d) With a reflector and one or more directors

Answer: d)

The number of lobes on each side of a 3l resonant antenna is –

- a) 3
- b) 6
- c) 2
- d) 1

Answer: b)

The electric field intensity of a Hertzian dipole at a remote point varies as -

Radiation resistance of a half wave folded dipole is -

- a) 72 W
- b) 144W
- c) 288 W
- d) 216W

Answer: 1/r

When a carrier wave is modulated at 100% it's power is increased by -

- a)100%
- b)150 %
- c)50%
- d)0%

Answer: c)

On a clear sky day, the atmospheric radio noise is strongest -

- a) During morning hours
- b) Around mid-day
- c) During nights
- d) In the afternoon

Answer: c)

TV broadcasting system in India is as per CCIR -

- a) System B
- b) System I
- c) System M
- d) System X

Answer: b)

For the safety measurement of the internal resistance of a 25-0-25 mA meter, a laboratory multimeter whose sensitivity is equal to –

- a) 1k ohm/volt can be used
- b) 10 k ohm/volt can be used
- c) 100 k ohm/volt can be used

d) 200 k ohm/volt can be used

Answer: d)

In order to measure moisture in wood the most suitable method is –

- a) Electrical conduction
- b) Electrical – capacitive
- c) Absorption of radiation
- d) Equilibrium- moisture vs humidity

Answer: a)

The flow rate of electrically conducting liquid without any suspended particle cannot be measured by –

- a) turbine flow meters
- b) electromagnetic flow meters
- c) ultrasonic flow meters
- d) thermistor based heat loss flow meters

Answer: d)

The most useful transducer for displacement sensing with excellent sensitivity, linearity and resolution is –

- a) an incremental encoder
- b) an absolute encoder
- c) LVDT
- d) a strain gauge

Answer: c)

When variable reluctance type tachometer has 150 teeth on the rotor & the counter records 13,500 pulses per second then the rotational speed will be–

- a) 4800 rpm
- b) 5400 rpm
- c) 6000 rpm
- d) 7200 rpm.

Answer: b)

41. On a voltage scale, zero dB m in a 600-ohm system could refer to –

- a) 1.732 V
- b) 1.0 V
- c) 0.7746 V
- d) 0.5V

Answer: b)

One of the following devices which is required in addition in order to measure pressure using LVDT is-

- a) strain gauge
- b) pitot tube
- c) Bourden tube

d) Rotameter

Answer: c)

It is required to measure temperature in the range of 13000 C to 15000 c) The most suitable thermocouple to be used as a transducer would be –

a) chromel - constantan

b) Iron - constantan

c) chromel - alumel

d) platinum- rhodium

Answer: d)

In a CSI if frequency of output voltage is f Hz, then frequency of input voltage to CSI is-

a) f

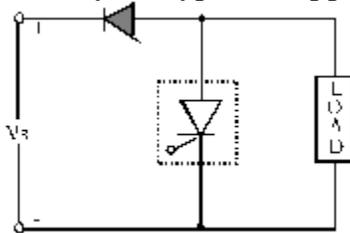
b) 2 f

c) f/2

d) 3 f

Answer: b)

Identify the type of chopper in the given circuit



a) Type A chopper

b) Type B chopper

c) Type C chopper

d) Type D chopper

Answer: b)

Maximum value of charging resistance in an UJT is associated with-

a) peak point

b) valley point

c) any point between peak and valley

d) after the valley point

Answer: a)

Thyristor A has rated gate current of 2A and thyristor B a rated gate current of 100 mA-

a) A is a GTO and B is a conventional SCR

b) B is a GTO and A is a conventional SCR

c) B may operate as a transistor

d) none of the above

Answer: a)

In a 3 phase full converter, the output voltage during overlap is equal to-

- a) zero
- b) source voltage
- c) source voltage minus the inductance drop
- d) average value of the conducting phase voltages

Answer: d)

Mark old the correct statement for Cycloconverters-

- a) step-down Cycloconverter (CC) works on natural commutation
- b) step up CC requires no forced commutation
- c) load commutated CC works on line commutation
- d) none of the above

Answer: a)

In a 3 phase full converter if load current is I and ripple free, then average thyristor current is-

- a)
- b)
- c)
- d)

Answer: b) $1/3(I)$

In the RF amplifier stage cascade (CE-CB) amplifier is used because it gives-

- a) Large voltage gain
- b) Low output impedance
- c) Large isolation between the input and the output
- d) None of the above

Answer: c)

Silicon diode is less suited for low voltage rectifier operation because-

- a) it can withstand high temperature
- b) ensures low PIV of the diodes
- c) ensures lower values of capacitance in the filter
- d) reduces ripple content

Answer: a)

An amplifier of class A is that in which -

- a) Base is biased to cut – off
- b) I_c flows most of the time
- c) I_e flows all the time
- d) V_c often raises to V_{cc}

Answer: c)

A transistor is in active region when-

- a) $I_B = \beta I_C$
- b) $I_C = \beta I_B$

- c) $I_C = I_E$
 - d) $I_C = I_B$
- Answer: a)

For coupling purposes in RF amplifier a buffer amplifier is used because it provides-

- a) Maximum loading and minimum mismatch
 - b) Minimum loading and minimum mismatch
 - c) Maximum loading and maximum mismatch
 - d) Minimum loading and maximum mismatch
- Answer: b)

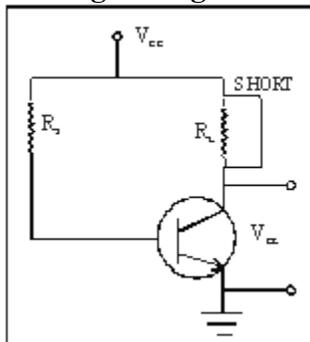
A transistor has CE parameter as $h_{ie} = 10k\Omega$, $h_{re} = 20 \times 10^{-4}$, $h_{se} = 100$, $h_{oe} = 25$ ms. The h_{ib} for this transistor will be-

- a) 100 Ω
 - b) 99.01 Ω
 - c) 5m Ω
 - d) 101k Ω
- Answer: b)

An FM radio receiver is tuned to a 90.6 MHz broadcast station. It will receive an image frequency of -

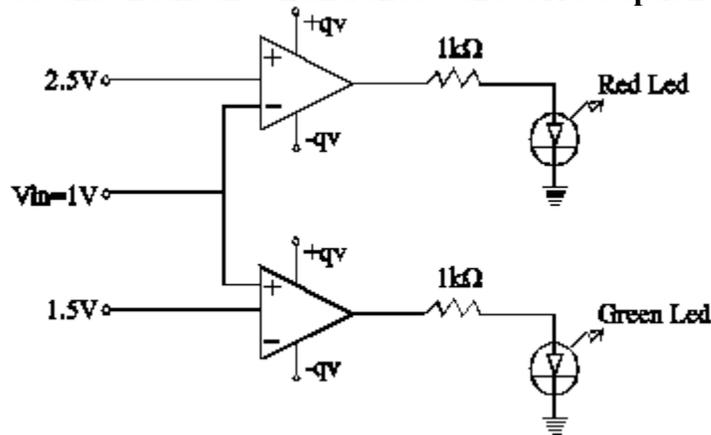
- a) 110 MHz
 - b) 112 Hz
 - c) 114 MHz
 - d) 120 MHz
- Answer: b)

In the given fig R_L is shorted out, then V_{CE} will become-



- a) 0V
 - b) $V_{CC} - I_B R_B$
 - c) Equal to V_{CC}
 - d) None of the above
- Answer c)

See the circuit shown and choose the correct option –



- a) Only red will glow
- b) Only green will glow
- c) Both red and green will glow
- d) Neither red nor green will glow

Answer: a)

A dc to dc converter having an efficiency of 80% is delivering 16W to a load) If the converter is generating an output of 200V from an input source of 20V, then the current drawn from the source will be –

- a) 0.1A
- b) 0.5A
- c) 1.0A
- d) 10.0A

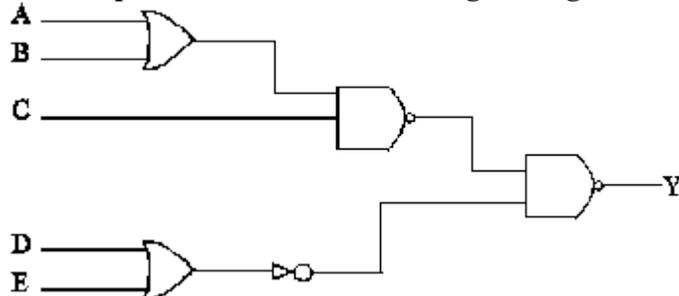
Answer: c)

A transistor is operated as a non-saturated switch to eliminate –

- a) storage time
- b) turn – off time
- c) turn – on time
- d) delay time

Answer: b)

The output Y of the circuit in the given figure is –



- a) $(A + B)C + DE$
- b) $AB + C(D + E)$

c) $(A + B)C + D + E$

d) $(AB + C) \cdot DE$

Answer: a)

Rotors used in a two-phase ac servomotor is –

a) solid iron motor

b) squirrel cage rotor

c) drag cup rotor

d) both b and c

Answer: d)

Major advantage of TWT over a klystron lies in its –

a) higher bandwidth

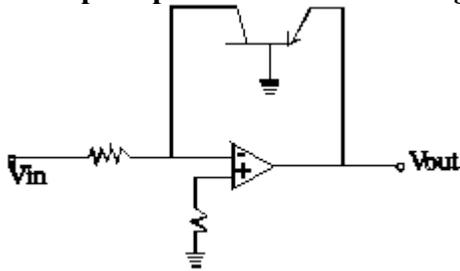
b) higher output

c) higher frequency

d) higher gain

Answer: d)

The op-map circuit shown in the given figure can be used for –



a) addition

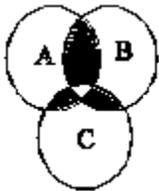
b) subtraction

c) both addition and subtraction

d) multiplication

Answer: d)

The Boolean expression for the shaded area in the given Venn diagram is –



Answer: $AB+BC+CA$

A lag compensator is basically a –

a) high pass filter

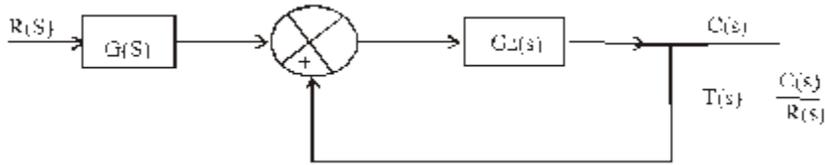
b) band pass filter

c) low pass filter

d) band elimination filter

Answer: c)

Transfer function T (S) of the system in the given fig is-



a. $T(s) = \frac{G_1(s)G_2(s)}{1 - G_2(s)}$

Answer:

The overall transfer function for a unity feedback system is $4/(S^2+4S+4)$ Mark the correct statement regarding this system

1. Position error constant k_p for the system is 4
2. The system type one.
3. The velocity error constant k_v for the system is finite.

Select the correct answer using the codes given below Codes

- a) 1,2 and 3 b) 1 and 2 c) 2 and 3 d) 1 and 3

Answer: d)

If the rotor's resistance and reactant's are respectively R and X1 its length and diameter are L and D for two phase a) c) servomotor, then-

In a PID controllers the transfer function G(s) is-

Transfer function can be approximated by the system- The transfer function of an amplifier is given by The high 3 db frequency of an amplifier will be approximately-

- a) 5850 kHz
- b) 585 kHz
- c) 5850 Hz
- d) 585 Hz

Answer: X/R is small but L/D is large

The output signals amplitudes for 1's and 0's in an ADM transmission systems are –

- a) Fixed and the repetition rate is also fixed
- b) Fixed but the repetition rate is variable
- c) Variable and the repetition rate is also variable
- d) Variable but the repetition rate is fixed

Answer: d)

Microwave link repeaters are typically 50km apart –

- a) Because of atmospheric attenuation
- b) Because of Output tube power limitations
- c) Because of the earth's curvature
- d) To ensure that the applied ac voltage is not excessive

Answer: c)

The amplifier inserted at intervals to amplify the signal and compensate for transmission loss on the cable are called-

- a) line amplifier
- b) equalizing amplifiers
- c) comparadors
- d) repeaters.

Answer: d)

Diversity reception is used to-

- a) increase receiver sensitivity
- b) improve receiver selectivity
- c) overcome degrading effect of fading
- d) overcome degrading effect of receiver detuning

Answer: c)

Mark out transferred electron device in the following-

- a) BARITT diode
- b) IMPATT diode
- c) Gunn diode
- d) Step recovery diode

Answer: c)

In the output of a normal monochrome receiver video detector voltages, which are not found, are -

- a) sync
- b) video
- c) sweep
- d) sound

Answer: c)

The HV anode supply for the picture tube of TV receiver is generated in the-

- a) mains transformer
- b) vertical output stage
- c) horizontal output stage
- d) horizontal deflection oscillator

Answer: c)

In antenna measurements using two aperture antennas of dimensions D_1 and D_2 , minimum separation between the two should be (λ is free space wavelength of radiation uses) The frequency range for [satellite](#) broad casting is –

Answer: $(D_1^2 + D_2^2) / \lambda$

The frequency range for satellite broad casting is

- a) 30 MHz - 300MHz
- b) 30 MHz - 3 GHz
- c) 3 GHz - 30 GHz

d) 30 GHz - 300 GHz

Answer: c)

Iris is used to –

- a) Over come power loss
- b) Over come bending effect
- c) Over come mismatch error
- d) Over come twist effect

Answer: c)

In schottky barrier diode current flows because of –

- a) Majority carriers
- b) Minority carriers
- c) Majority and minority carriers
- d) None

Answer: b)

Which antennas are used in microwave communication –

- a) long wave antennas
- b) Rhombic antennas
- c) Paraboloidal antennas
- d) All of above

Answer: c)

Among translator & time of sight system capacity –

- a) Of translator is more
- b) Of line of sight is more
- c) Having equal capacity
- d) No relation such as

Answer: a)

No of T-state required for memory read or write operation-

- a) 2
- b) 3
- c) 4
- d) 6

Answer: b)

In data transfer operation which flag get affected-

- a) 3140 flog.
- b) carry flog
- c) sign flog.
- d) none

Answer: d)

The storage and retrieval of data on stacks should follow sequence-

- a) last in first out
- b) first in first out
- c) random in random out
- d) none

In flowchart which figure represents process like subroutine-

||||

While executing program microprocessor checks INTR line clearing-

- a) each instruction
- b) after interval of two instruction
- c) after a subroutine
- d) at the end of program.

Answer: a)

93. In which error check technique of data communication 2's complement of all bytes of data is transmitted with data-

- a) Even parity
- b) odd parity
- c) check scans
- d) cyclic redundancy

Answer: a)

Program execution hierarchy decides which operator-

- a) is most important
- b) is used first
- c) is fastest
- d) operators on largest number

Answer: c)

(375)₁₀ = (—)₈

- a) 550
- b) 557
- c) 567
- d) 577

Answer: c)

To obtain 2048 8 memory using 128 8 memory chip how many IC required-

- a) 2
- b) 4
- c) 8
- d) 16

Answer: d)

A Decimal no. 17 can be converted in binary, the binary no. will be.-

- a) 10001
- b) 01110
- c) 00111
- d) 11100

Answer: a)

Is the Universal logic gate-

- a) AND
- b) OR
- c) NAND
- d) X-OR

Answer: c)

A monostable state in multivibrator means-

- a) which returns itself to its single stable state
- b) the state used only once in circuit
- c) the state of circuit can not get changed
- d) the state of circuit always changing

Answer: a)

For designing binary counter which flip flop is preferred -

- a) T FF
- b) SR FF
- c) D FF
- d) JKFF

Answer: c)

His handwriting was not — so I could not read his note –

- a) attractive
- b) eligible
- c) clear
- d) legible

Answer: d)

They started to — people into the theatre only at six -

- a) enter
- b) admit
- c) follow
- d) accept

Answer: a)

I told him to buy things that are lasting (Give the appropriate synonym of the underlined word).

- a) ending
- b) ordinary

- c) durable
- d) cheap

Answer: c)

Give the word which is most opposite in meaning of the word 'evident'-

- a) doubtful
- b) unimportant
- c) disagreed
- d) understood

Answer: a)

I expressed by disagreement —— him on that issue-

- a) between
- b) with
- c) about
- d) for

Answer: b)

'Sugarbowl' of the world is -

- a) India
- b) Cuba
- c) Brazil
- d) USA

Answer: b)

Palk strait separates-

- a) India and Srilanka
- b) India and Burma
- c) Britain and France
- d) Malaysia and Sumatra

Answer: a)

The minimum number of atoms in a molecule of an element are-

- a) 1
- b) 5
- c) 2
- d) 10

Tides in the sea are caused by-

- a) Effect of sun
- b) Effect of moon
- c) combined effect of moon and sun
- d) Gravitational, centrifugal and centripetal forces

Answer: c)

The Bar council of India decided to close over law colleges across the country for their failure to maintain minimum teaching standard) There number is

- a) 140
- b) 200
- c) 150
- d) 100

Answer: c)

Aswan Dam is located in-

- a) Egypt
- b) Libya
- c) Sudan
- d) Iran

Answer: a)

Ghana Birds sanctuary is in the state of -

- a) Rajasthan
- b) Madhya Pradesh
- c) Uttar Pradesh
- d) Maharashtra

Answer: a)

Dry ice is-

- a) Frozen carbon monoxide
- b) Frozen carbon dioxide
- c) Frozen ammonia
- d) None of these

Answer: b)

East flower river of India is -

- a) Cauvery
- b) sone
- c) Narmada
- d) Tapti

Answer: a)

The total length of the great wall of China is –

- a) 1,400 miles
- b) 1,500 miles
- c) 1,300 miles
- d) 1,400 miles

Answer: a)

Deficiency of vitamin C may result in-

- a) beriberi
- b) night blindness

- c) dermatitis
- d) Scurvy

Answer: d)

Bharat Shah a film financier was granted bail by Supreme Court after a period of –

- a) 11 months
- b) 2 years
- c) 18 months
- d) 15 months

Answer: d)

Indian local time is based on-

- a) 800 E longitude
- b) E longitude
- c) 1100 E longitude
- d) 250 E longitude

Answer: Can you Answer this?

Which one is a good preservative of food?

- a) Spirit
- b) Formaldehyde
- c) Sugar

Answer: b)

BSNL JTO 2007/2008 Questions and Solutions

Posted by **Editor**

June 26, 2008

BSNL JTO 2007/2008 General Knowledge Questions and Solutions Also From Section 1 and Section 2, Including..

- Question on CMOS capacitance..
- Voltage Controlled Voltage Amplifier... Current Controlled
- Skottky : Fast; four options which is true.
- Current on change in dimension - Piezo Electric Material
- Some materials conduct at room temperature can be a controversial question...
- The guy who put question was a Thyristor fetish.
- Also opamp gain question.
- Then N-circles ??? represent
- A question on solenoid. uNI.
- Which is true. LED operated in Fwd bias, etc. etc
- Triac conducts in more than one direction..

- Need of transformer in output side of thyristor..
- Range possible if SNR drops by 20DB.
- Diameter of N circles.
- Questions on breakaway points in a bode plot. $s/(s-1)(s-2)$
- Thevenin's Circuit.

1. Which Vitamin is found in Oranges and Lemons?

Ans: vitamin C in oranges.

2. Shimla Agreement was done between India and _____

1. China,
2. Nepal,
3. Pakistan,
4. Bangladesh.

Ans: Pakistan

3. Who is known as Iron man of India?

Ans: Saradar Vallabhai

4. Which is oldest IIT (Indian Institute of Technology)?

Ans: IIT Karagpur

5. With which Indian state does the International border of Myanmar does not touch?

Assam, Nagaland, Meghalaya, Manipur, Mizoram etc.. (These are Choices.)

Ans: Mizoram

6. Fill in the blanks with preposition- I agree _____ this proposal.

Ans: I agree with the proposal.

7. What is the antonym of Obsolete.

Ans: Current.

8. A map was given with West Bengal and Kerala was shaded. Question was- what is the main product of the shaded places?

Ans: Major Tea Producing States In India

- North India – Assam, West Bengal, Tripura, Arunachal Pradesh, Nagaland & Himachal Pradesh
- South India – Tamilnadu, Kerala & Karnataka

9. Four sentences were given and a grammatically correct sentence was to be founded.

Ans: French live in France.

10. What is Hinyan? Its Hinayana Buddhism

11. What is Kalpana-2 Satellite meant for?

Ans: Kalpana is tracking monsoons. I think there is only Kalpana-1. You see satellite images of Kalpana-1 tracking the onset of Monsoon and depressions in Bay of Bengal.

12. Where was the First Round Table Conference Held?

Ans: London

13. Who is the writer of the book-‘My Country My Life?’

Ans: LK Advani.

14. Who Got First Woman Grand Slam?

Ans: It's not Grand Slam. Grandmaster. **The answer is S. Vijayalakshmi.**

15. When is Telecommunications Day?

Ans: Telecommunications Day was celebrated last month. The date is **17th May**. BSNL celebrates it.

16. Which Gas is responsible for Green House Effect? Carbon Dioxide ???

Ans: CO₂ (Carbon dioxide)

17. A group of Islands is known as _____

Ans: A large group of islands is known as **archipelago**

From Section - 1 and 2 mixed

1. What device is used to measure very low resistance?

Ans: Kelvin Double Bridge

2. L and C given and Characteristic impedance was to be found. Formula is $\sqrt{L/C}$. Though exact values of L & C is Can't Re-Call

Ans: answer was 60 Ohm.

3. ZL and Z₀ was given and SWR was to be calculated.

4. After what wavelength all the properties of Tx lines repeats itself?

5. As compared to twisted pair lines, the repeater spacing requirement in Optical fiber is more or less or same?

6. How much is the minimum HDD partition size for FAT32 Format?

Ans: 512 MB or larger. (FAT 32 Supports 512 MB or larger size of partition)

7. What is the value of 'a' after execution of this program? Ans 16

8. A RAM has 32 address lines and 16 Output lines. What is memory size?

Ans: it is 8GB because 32 address lines means 2^{32} i.e. $4 * 1024 * 1024 * 1024$ address locations available and each location has 2bytes(16 output lines). So total memory is $2 * 4 * 1024 * 1024 * 1024 = 8GB$

9. A question was there that a C program can be compiled with C++

compiler or C++ program with C Compiler or Fortran Compiler. C can be compiled in c++

10. Which interrupt of Microprocessor is edge triggered...?

Ans: RST.65

11. Which programmable interface of microprocessor is bit set reset mode?

Ans: I think 8255 Bit Set/Reset (BSR) (Please Confirm)

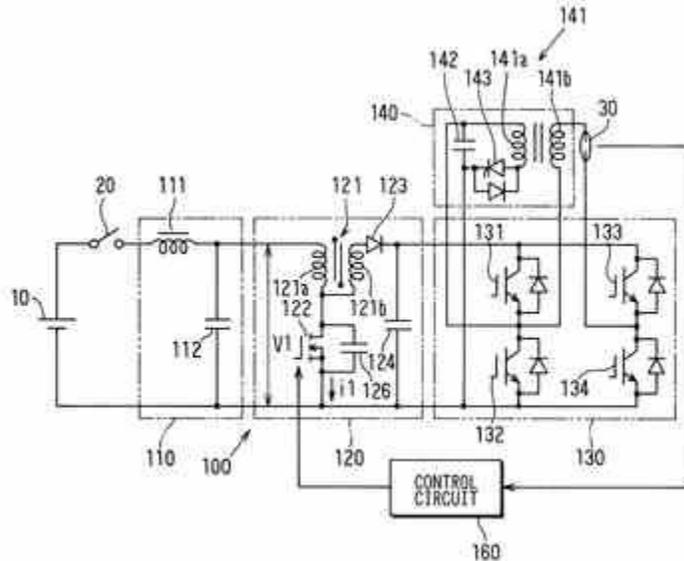
12. An EX NOR gate was given . One input is T and other input is grounded.

What is its output? [**Think what it is?**]

13. What is binary equivalent of 74H and what is its 2's compliment ?

$0 \times 74 = 0b1110100$,

14. A Figure was given....which part is snubber circuit?



A Similar Ckt Not Exactly the Same Still Identify Where the Snubber ckt is?

15. Which of the antenna is non resonant?

Ans: Rhombic Antenna

16. An instrument gives 1% error for 500 V full scale measurement? What is %age error for measuring 250 V?

17. For A 5 varibale K map Minternms was given and SOP expression was to be found?

18. An assembly language program was given and T states for all instructions were given. Total frequency was to be calculated.

19. If O/P resistance is more and I/p Resistance is less...which feedback configuration is used?

20. The S matrix of lossless network?

21. In a micro strip line what exists? TE or TM or TEM or Quasi TEM?
22. Which is preferred for TE and TM? Coaxial cable or Stripline or Dielectric filled waveguide?
23. A RC series cct with $R=3k$ and $C=2$ micro F was given . Switch was initially open and closed at $t=0$. The ratio of voltage across C at $t=0$ and $t=6ms$. Calculate?
24. A 10 V source with internal $r=250$ and Load $R=500$ is there. A voltmeter with $r=500$ is connected across R. the % change in voltage wrt true voltage without taking the r of voltmeter.
25. If distance between 2 plates of capacitor is reduced by 10% how much is %age change in capacitance?
26. Specific resistance for Cu and Al is given. Diameter of Cu is given. For same resistance per unit length what is radius of Al in mm.
27. Conductance of a metallic wire is directly/inversely proportional to length and directly/inversely proportional to area.
28. A Memory was there with input lines A0- A11 and Chip Select Low Line was through NAND gate having input and A14 –A15. What is address range?
29. In order to measure the voltage of thermocouple the amplifier should havegreater slew rate or lesser input offset current or——— or ——“?
30. MASER RF Amplifier is not used for_____?
- Ans:** Radio Astronomy
- What is binary equivalent of 74H and what is its 2's complement ?

Following Are Bharath Sanchar Nigam Limited (BSNL) Junior Telecom Officers (JTO) Exam Paper::–

If the voltage applied across a capacitance is triangular in waveform then the waveform of the current is-

- a) Triangular
- b) Trapezoidal
- c) Sinusoidal
- d) Rectangular

Answer is :- Rectangular

1. One of the following statement which is true for relative dielectric constant is -
- a) It is dimensionless

- b) It is not equal to unity for vacuum
- c) It's value for all substances is less than one
- d) None

Answer is :- It is dimensionless

2. Pure metals generally have-

- a) high conductivity and low temperature coefficient
- b) high conductivity and large temperature coefficient
- c) low conductivity and zero temperature coefficient
- d) low conductivity and high temperature coefficient

Answer is :- high conductivity and large temperature coefficient

3. For small size, high frequency coils, the most common core material is

- a) Air
- b) Ferrite
- c) Powdered iron
- d) Steel

Answer is :- Air

4. For an abrupt junction Varactor diode, the dependence of device capacitance (C) on applied reverse bias (V) is given by-

- a) $C \propto V^{1/3}$
- b) $C \propto V^{-1/3}$
- c) $C \propto V^{1/2}$
- d) $C \propto V^{-1/2}$

Answer is :- $C \propto V^{-1/3}$

5. A superconductor is a-

- a) A material showing perfect conductivity and Meissner effect below a critical temperature
- b) A conductor having zero resistance
- c) A perfect conductor with highest diamagnetic susceptibility
- d) A perfect conductor which becomes resistive when the current density through it exceeds a critical value

Answer is :- A material showing perfect conductivity and Meissner effect below a critical temperature

6. When a semiconductor based temperature transducer has a temperature coefficient of – 2500 mV/°C then this transducer is indeed a-

- a) Thermistor
- b) Forward biased pn junction diode
- c) Reverse biased pn junction diode
- d) FET

Answer is :- Forward biased pn junction diode

7. The location of lightning arrestor is -

- a) Near the transformer
- b) Near the circuit breaker
- c) Away from the transformer
- d) None

Answer is :- Near the transformer

8. Time constant of an RC circuit increases if the value of the resistance is -

- a) Increased
- b) Decreased
- c) Neither a nor b
- d) Both a and b

Answer is :- Increased

9. Intrinsic semiconductors are those which -

- a) Are available locally
- b) Are made of the semiconductor material in its purest form
- c) Have more electrons than holes
- d) Have zero energy gaps

Answer is :- Are made of the semiconductor material in its purest form

10. The primary control on drain current in a JFET is exerted by -

- a) Channel resistance
- b) Size of depletion regions
- c) Voltage drop across channel
- d) Gate reverse bias

Answer is :- Gate reverse bias

11. The electrical conductivity of metals which is expressed in $\text{ohm}^{-1} \text{m}^{-1}$ is of the order of -

- a) 10¹⁰
- b) 10⁵
- c) 10⁻⁴
- d) 10⁻⁶

Answer is :- 10⁵

12. When biased correctly, a zener diode –

- a) acts as a fixed resistance
- b) has a constant voltage across it
- c) has a constant current passing through it
- d) never overheats

Answer is :- has a constant voltage across it

13. The current amplification factor α_{dc} is given by –

- a) I_C/I_E
- b) I_C/I_B

c) I_B/I_C

d) I_B/I_C

Answer is :- I_C/I_E

14. Compared to bipolars, FETs have-

a) high input impedance

b) low input impedance

c) same input impedance

d) none

Answer is :- high input impedance

15. The source-drain channel of JFET is -

a) ohmic

b) bilateral

c) unilateral

d) both a and b

Answer is :- both a and b

16. diac is equivalent to a -

a) Pair of SCRs

b) Pair of four layer SCRs

c) Diode and two resistors

d) Triac with

Answer is :- Pair of four layer SCRs

17. When a sample of N type semiconductor has electron density of $6.25 \times 10^{11} / \text{cm}^3$ at 300K and if the intrinsic concentration of carriers in this sample is $2.5 \times 10^{13} / \text{cm}^3$ then the hole density will be –

a) $10^6 / \text{cm}^3$

b) $10^3 / \text{cm}^3$

c) $10^{10} / \text{cm}^3$

d) $10^{12} / \text{cm}^3$

Answer is :- $10^3 / \text{cm}^3$

18. The statement 'In any network of linear impedances, the current flowing at any point is equal to the algebraic sum of the currents caused to flow at that point by each of the sources of emf taken separately with all other emf's reduced to zero' represents -

a) Kirchhoff's law

b) Norton's theorem

c) Thevenin's theorem

d) Superposition theorem

Answer is :- Superposition theorem

19. One of the following modes which has the characteristics of attenuation becoming less as the frequency is increased and is attractive at microwave frequencies of circular cylindrical wave guides is –

- a) TE₁ mode
 - b) TM₀₁ mode
 - c) TE₀₁ mode
 - d) Higher order mode
- Answer is :- TE₀₁ mode

20. A two-port network is symmetrical if –

- a) $z_{11}z_{22} - z_{12}z_{21} = 1$
 - b) $h_{11}h_{22} - h_{12}h_{21} = 1$
 - c) $AD - BC = 1$
 - d) $y_{11}y_{22} - y_{12}y_{21} = 1$
- Answer is :- $AD - BC = 1$

21. For transmission line load matching over a range of frequencies, it is best to use a-

- a) balun
- b) broad band directional coupler
- c) double stub
- d) single stub of adjustable position

Answer is :- double stub

22. The poles and zeros of a driving point function of a network are simple and interlace on the negative real axis with a pole closest to the origin. It can be realised -

- a) by an LC network
- b) as an RC driving point impedance
- c) as an RC driving point admittance
- d) only by an RLC network

Answer is:- only by an RLC network

23. Poles and zeros of a driving point function of a network are simple and interlace on the $j\omega$ axis. The network consists of elements –

- a) R and C
- b) L and C
- c) R and L
- d) R, L and C

Answer is :- L and C

24. For a two port reciprocal network, the output open circuit voltage divided by the input current is equal to –

- a) B
- b) Z_{12}
- c) —
- d) h_{12}

Answer is :- Z_{12}

25. In a short electric doublet the radiation properties are so that-

- a) The induction field diminishes as the square root of the distance and is only

appreciable in the vicinity of the conductor.

- b) In the radiation, magnetic field is minimum when the current is maximum.
- c) The radiation resistance of a short doublet antenna is extremely high.
- d) Mean rate of power through a unit area of spherical sphere surrounding this doublet is proportional to the square of the elemental length, other factors remaining constant.

Answer is :- Mean rate of power through a unit area of spherical sphere surrounding this doublet is proportional to the square of the elemental length, other factors remaining constant.

26. The frequency modulated (FM) radio frequency range is nearly -

- a) 250 – 300 MHz
- b) 150 – 200 MHz
- c) 90 – 105 MHz
- d) 30-70 MHz

Answer is :- 90 – 105 MHz

27. In an underground cable the distortion in the transmission of carrier frequency can be eliminated by using -

- a) Inductive loading
- b) Resistive loading
- c) Capacitive loading
- d) Shielding

Answer is :- Inductive loading

28. The characteristic impedance of a transmission line with inductance 0.294 mH /m and capacitance 60 pF/m is -

- a) 49 W
- b) 60 W
- c) 70 W
- d) 140 W

Answer is :- 70 W

30. For a quarter wavelength ideal transmission line of characteristic impedance 50 ohms and load impedance 100 ohms, the input impedance will be –

- a) 25W
- b) 50W
- c) 100W
- d) 150W

Answer is :- 25W

31. The depth of penetration or skin depth for an electromagnetic field of frequency 'f' in a conductor of resistivity r and permeability m is-

- a) inversely proportional to r and f and directly proportional to m
- b) directly proportional to r and inversely proportional to f and m
- c) directly proportional to f and inversely proportional to r and m

d) inversely proportional to r and m and directly proportional to f
Answer is :- directly proportional to r and inversely proportional to f and m

32. When an antenna has a gain of 44dB then assuming that the main beam of the antenna is circular in cross-section the beam width will be -

- a) 0.4456°
- b) 1.4456°
- c) 2.4456°
- d) 3.4456°

Answer is :- 2.4456°

33. Lens antennas used for microwaves are usually made of -

- a) Polystyrene
- b) Glass of low refractive index
- c) Paraboloid surfaces
- d) Dielectric media having large refractive index

Answer is :- Polystyrene

34. One of the following types of instrument which is an electrometer is -

- a) Electrodynamometer
- b) PMMC
- c) Electrostatic
- d) Moving iron

Answer is :- Electrostatic

35. When an ac current of 5A and dc current of 5A flow simultaneously through a circuit then which of the following statement is true ?

- a) An ac ammeter will read less than 10A but more than 5A
- b) An ac ammeter will read only 5A
- c) A dc ammeter will read 10A
- d) A dc ammeter will read zero

Answer is :- An ac ammeter will read less than 10A but more than 5A

36. When Q factor of a circuit is high, then -

- a) power factor of the circuit is high
- b) impedance of the circuit is high
- c) bandwidth is large
- d) none of these

Answer is :- none of these

37. The resolution of a logic analyser is -

- a) the maximum number of input channels
- b) the minimum duration of the glitch it can capture
- c) its internal clock period

d) the minimum amplitude of input signal it can display
Answer is :- the minimum amplitude of input signal it can display

38. A memoryless system is –

- a) causal
- b) not causal
- c) nothing can be said
- d) none

Answer is :- causal

39. An air capacitor is a –

- a) time variant
- b) active device
- c) time invariant
- d) time invariant and passive device

Answer is :-time invariant and passive device

40. Thermistors are made of -

- a) pure metals
- b) pure insulators
- c) sintered mixtures of metallic oxides
- d) pure semiconductor

Answer is :- sintered mixtures of metallic oxides

41. Pirani gauge is used to measure –

- a) very low pressures
- b) high pressures
- c) pressures in the region of 1 atm
- d) fluid flow

Answer is :- very low pressures

42. These circuits converts input power at one frequency to output power at a different frequency through one stage conversion –

- a) AC voltage controllers
- b) Cyclo converters
- c) Phase controlled rectifiers
- d) Inverters

Answer is :-Cyclo converters

43. In a forward voltage Triggering thyristor changes from –

- a) off state to on state
- b) on state to off state
- c) on state to on state
- d) off state to off state

Answer is :- off state to on state

44. A thyristor, when triggered, will change from forward blocking state to conduction state if its anode to cathode voltage is equal to -

- a) peak repetitive off state forward voltage
- b) peak working off state forward voltage
- c) peak working off state reverse voltage
- d) peak non-repetitive off state forward voltage

Answer is :- peak working off state forward voltage

45. Gate characteristic of a thyristor-

- a) is a straight line passing through origin
- b) is of the type $V_g = a + bI_g$
- c) is a curve between V_g and I_g
- d) has a spread between two curves of $V_g - I_g$

Answer is :-has a spread between two curves of $V_g - I_g$

46. A four quadrant operation requires-

- a) two full converters in series
- b) two full converters connected back to back
- c) two full converters connected in parallel
- d) two semi converters connected back to back

Answer is :-two full converters connected back to back

47. If for a single phase half bridge inverter, the amplitude of output voltage is V_s and the output power is P , then their corresponding values for a single phase full bridge inverter are -

- a) V_s, P
- b) $V_s/2, P$
- c) $2V_s, 2P$
- d) $2V_s, P$

Answer is :- $2V_s, 2P$

48. In an enhancement type MOSFET the output V-I characteristics has -

- a) only an ohmic region
- b) only a saturation region
- c) only ohmic region at 10 W voltage value followed by a saturation region at higher voltages
- d) an ohmic region at large voltage values preceded by a saturation region at lower voltages

Answer is :- only ohmic region at 10 W voltage value followed by a saturation region at higher voltages

49. The energy gap in a semiconductor -

- a) increases with temperature
- b) remains constant
- c) slightly increase with temperature

d) decrease with temperature

Answer is :-decrease with temperature

50. In an electronic circuit matching means -

a) connecting a high impedance directly to low impedance

b) selection of components which are compatible

c) transferring maximum amount of signal between different kinds of circuits.

d) RC coupled stages

Answer is :-transferring maximum amount of signal between different kinds of circuits.

51. P channel FETs are less superior than N channel FETs because

a) They have higher input impedance

b) They have high switching time

c) They consume less power

d) Mobility of electrons is greater than that of holes

Answer is :- Mobility of electrons is greater than that of holes

52. Small increase in temperature in the CE connected transistor is the -

a) Increase in I_{CEO}

b) Increase in ac current gain

c) Decrease in ac current gain

d) Increase in output resistance

Answer is :- Increase in I_{CEO}

53. An amplifier has a band width of 20 KHz and a midband gain of 50 without feedback.

If a negative feedback of 1% is applied then bandwidth with feedback is -

a) 13. 3 KHz

b) 30KHz

c) 10KHz

d) 40KHz

Answer is :- 30KHz

54. The output of a class B amplifier -

a) is distortion free

b) consists of positive half cycles only

c) is like the output of a full wave rectifier

d) comprises short duration current pulses

Answer is :- consists of positive half cycles only

55. An amplifier with negative feedback -

a) lowers its lower 3 dB frequency

b) raises its upper 3 dB frequency

c) increases its bandwidth

d) all of the above

Answer is :- all of the above

56. What changes would be necessary in block C if FM signals are to be received -

- a) Block becomes redundant
- b) A FM detector would be required
- c) A high frequency signal generator
- d) An additional local oscillator will be needed

Answer is :- A FM detector would be required

57. The main disadvantage of Diode-Transistor logic (DTL) is its-

- a) greater speed
- b) slower speed
- c) average speed
- d) none of the above

Answer is :- slower speed

58. Time delay Dt in digital signals in an SIS O shift register is given by –

- a) $Dt = N \cdot Fc$
- b) $Dt = N \cdot 1/Fc$
- c) $Dt = 1/N \cdot Fc$
- d) $Dt = N \cdot 1/Fc$

Answer is :- $\Delta t = N \cdot 1/Fc$

59. The output Q_n is 1 in a JK flip flop and it does not change when clock pulse is applied) The possible combination of J_n and K_n can be –

(y denotes don't care)

- a) y and 0
- b) y and 1
- c) 0 and y
- d) 1 and y

Answer is :- y and 0

60. Basic memory cell of dynamic RAM consists of –

- a) a flip flop
- b) a transistor acting as a capacitor
- c) a transistor
- d) a capacitance

Answer is :- a transistor acting as a capacitor

61. The 2's complement of 10002 is –

- a) 0111
- b) 0101
- c) 1000
- d) 0001

Answer is :-1000

62. Master slave flip-flop is made up of –

- a) two flip flops connected in series

- b) two flip flops connected in parallel
 - c) a debouncer circuit
 - d) a-D- latch
- Answer is :-two flip flops connected in series

63. Number of nybbles making one byte is –
- a) 2
 - b) 4
 - c) 8
 - d) 16
- Answer is :- 2

64. The intrinsic impedance of free space-
- a) is independent of frequency
 - b) decreases with increase of frequency
 - c) increases with increase of frequency
 - d) varies as square root of frequency
- Answer is :-is independent of frequency

65. A system consists of 12 poles and 2 zeroes. Its high frequency asymptote in its magnitude plot has a slope of -
- a) –200 dB/decade
 - b) –240 dB/decade
 - c) –230 dB/decade
 - d) –320 dB/decade
- Answer is :- –200 dB/decade

66. Considering the conditions-
1. High loop gain
 2. Less ringing
 3. Greater damping
 - 4 Negative dB gain margin
- System stability requirements would include?

- a) 1 and 3
 - b) 1, 2 and 3
 - c) 1 and 4
 - d) 2, 3 and 4
- Answer is :-2, 3 and 4

67. In the equatorial plane only Geosynchronous satellite are launched because it is the only plane which provides –
- a) 24 hour orbit
 - b) *stationary* satellite
 - c) global communication
 - d) zero-gravity environs
- Answer is :- stationary satellite

68. Radio Broadcasting is an example of –

- a) space multiplexing
- b) time multiplexing
- c) frequency multiplexing
- d) none of the above

Answer is :- frequency multiplexing

69. PAM signals can be demodulation by using a –

- a) Low pass filters (LPE) alone
- b) A Schmitt trigger followed by a LPF
- c) A differentiator followed by a LPF
- d) A clipper circuit by a LPF

Answer is:- A clipper circuit by a LPF

70. In an FDM receiver channels can be separated by using –

- a) AND gates
- b) Band pass
- c) differentiation
- d) Integration

Answer is :- AND gates

71. The most common modulation system used for telegraphy is-

- a) frequency shift keying
- b) two – tone modulation
- c) pulse code modulation
- d) single tone modulation

Answer is :- frequency shift keying

72. Use of varactor diode in generation of modulated signal be-

- a) FM generation only
- b) 100AM generation only
- c) PM generation only
- d) both PM and AM generation

Answer is :- FM generation only

73. In colour picture tube shadow mask is used to-

- a) reduce x-ray emission
- b) ensure that each beam strikes only its own dots
- c) increase screen brightness
- d) provide degaussing for the screen

Answer is :- increase screen brightness

74. The circuit that separates composite video waveform from the sync pulses is-

- a) the keyed AGC amplifier
- b) a clipper
- c) an integrator

d) a sawtooth current

Answer is :- a sawtooth current

75. Band width of microwaves is-

a) 1GHz -10³ GHz

b) 1GHz –100 GHz

c) 1 GHz –10 GHz

d) 1 GHz – 10⁶ GHz

Answer is :- 1GHz -10³ GHz

76. In transverse Magnetic mode-

a) no electric line is in direction of propagation

b) no magnetic line is in direction of propagation

c) bath magnetic & electric lines are is direction of propagation

d) neither magnetic nor electric lines in direction of propagation

Answer is :- no magnetic line is in direction of propagation

77. Signal transmission in sky wave propagation is due to –

a) Reforction of wave

b) Reflection of wave

c) Pierus through Inosphere

d) None

Answer is :- Reforction of wave

78. According to Barkhausen Criterion Phase shift of signal should be –

a) 600⁰

b) 900⁰

c) 1800⁰

d) 3600⁰

Answer is :- 360⁰

79. The transmission does not have -

a) Partition noise

b) Flicker noise

c) resistance

d) Short noise

Answer is :- Partition noise

80. Varactor diode has non linearity of -

a) capacitance

b) Inductance

c) Resistance

d) Is a linear device

Answer is :- capacitance

81. Noise figure is calculated as –

- a) i/p signal to noise ratio X o/p signal to noise ratio
- b) i/p S/N Ratio / O/P S/N Ratio
- c) i/p S/N Ratio / O/P S/N Ratio X 100
- d) i/p S/N Ratio + O/P S/N Ratio

Answer is :- i/p S/N Ratio / O/P S/N Ratio

82. You can determine quickly the effect of adding poles and zeros by –

- a) Nicholas chart
- b) Nyquist plot
- c) Bode plot
- d) Root locus.

Answer is :- Bode plot

83. The polar plot of $G(S)$ = intercepts real axis at $w = w_0$. Then, the real part and w_0 are given by-

- a) -5, 1
- b) -2.5, 1
- c) -5, 0-5
- d) -5, 2

Answer is :- -5, 1

84. Laplace transform $F(s)$ of a function $f(t)$ is given by $F(s) = 10s(s+7)/(s+1)(s+8)(s+10)$
The initial and final values of $F(t)$ will be respectively-

- a) zero and 1
- b) zero and 10
- c) 10 and zero
- d) 70 and 80

Answer is :- 10 and zero

85. A satellite link uses different frequencies for receiving and transmitting in order to –

- a) avoid interference from terrestrial microwave links
- b) avoid interference between its powerful transmitted signals and weak in coming signal
- c) minimize free-space losses
- d) maximize antenna gain

Answer is :- avoid interference between its powerful transmitted signals and weak in coming signal

86. The first determining factor in selecting a satellite system is its-

- a) EIRP
- b) Antenna size
- c) Coverage area
- d) Antenna gain

Answer is :- Coverage area

87. Equalizing pulses in TV are sent during-

- a) horizontal blanking
- b) vertical blanking
- c) the serrations
- d) the horizontal retrace

Answer is :-vertical blanking

88. The son seems to have —— from his father a somewhat gloomy and moody manner-

- a) washed
- b) inherited
- c) admired
- d) attempt

Answer is :-inherited

89. Essayist works with words as sculptor with-

- a) water
- b) stone
- c) air
- d) hills

Answer is :- stone

90. What is a collection of sheep called ?

- a) bunch
- b) flock
- c) herd
- d) comet

Answer is :- flock

91. Join these sentences meaningfully by choosing the correct alternative from the following :

You can buy a book. You can read it.

- a) and
- b) nor
- c) either
- d) neither

Answer is :- and

92. What is the opposite of Asperity –

- a) gentility
- b) superiority
- c) kindness
- d) clarity

Answer is :- superiority

93. The Election Commission functions under-

- a) Ministry of Home Affairs
- b) Ministry of Law
- c) Prime Minister's Secretariat
- d) None of these

Answer is :-None of these

94. Article 352 of Indian Constitution needs to be revoked in case-

- a) President's Rule is to be imposed
- b) Emergency is declared
- c) Services of a Government servant are to be terminated without any enquiry
- d) A political party of national level is to be banned

Answer is :- Emergency is declared

95. Radio-activity was first discovered by-

- a) Becquerel
- b) Madam Curie
- c) Rutherford
- d) Jenner

Answer is :- Becquerel

96. Ninth Plan in India ranges from-

- a) 1995-2000
- b) 1996-2001
- c) 1997-2002
- d) 1998-2003

Answer is :- 1997-2002

97. How much electricity does India propose to generate through nuclear power by the year 2000 AD?

- a) 5,000 MW
- b) 10,000 MW
- c) 15,000 MW
- d) 20,000 MW

Answer is :- 10,000 MW

98. In which year did the fall of Bastille take place?

- a) 1769
- b) 1789
- c) 1889
- d) 1869

Answer is :- 1789

99. To form a quorum how many members of the Lok Sabha or Rajya Sabha should be present?

- a) 1/10th of total membership

- b) 1/6th of total membership
 - c) 1/4th of total membership
 - d) 1/5th of total membership
- Answer is :- 1/10th of total membership

100. How many countries are non-permanent members of the Security Council?
- a) 6
 - b) 7
 - c) 9
 - d) 10
- Answer is :- 10

101. The International Date Line is represented by-
- a) 100⁰meridian
 - b) 00⁰ meridian
 - c) 180⁰meridian
 - d) 90⁰ meridian
- Answer is :- 180⁰ meridian

102. India's first satellite was launched from-
- a) Sriharikota
 - b) Cape Kennedy
 - c) Bangalore
 - d) A Soviet cosmodrome
- Answer is :- A Soviet cosmodrome

103. Name the author of the famous book "Politics"-
- a) Aristotle
 - b) Socrates
 - c) Plato
 - d) None of them
- Answer is :- Aristotle

104. "Guernica" is Picasso's painting on-
- a) The Spanish Civil War
 - b) The American Civil War
 - c) The French Revolution
 - d) The Russian Revolution
- Answer is :- The Spanish Civil War

105. The object of the Supreme Court's Keshvanand Bharati ruling is -
- a) To put a limit on Parliament's amendatory powers
 - b) To give unlimited powers to Parliament to amend the Constitution
 - c) To give precedence to Directive Principles over Fundamental Rights
 - d) None of these
- Answer is :- To put a limit on Parliament's amendatory powers

106. Which country in July '99 officially announced mastering of indigenously developed neutron bomb technology?

- a) N. Korea
- b) France
- c) India
- d) China

Answer is :- China

107. Shifting cultivation is commonly used in which of the following states?

- a) Tamil Nadu
- b) Maharashtra
- c) Jammu and Kashmir
- d) Nagaland

Answer is :- Nagaland

108) The polar plot of $G(S) = 10/s(s+1)^2$ intercepts real axis at $w = w_0$. Then, the real part and w_0 are given by?

Answer is :- $-5, 1$

BSNL GE-JTO Recruitment Examination

Posted by **Editor**

March 31, 2008

BSNL GE-JTO Recruitment Examination

Test Paper - VIII

1. When a inductive coil connected to a 200 V, 50Hz ac supply with 10A current flowing through it dissipates 1000 watts then which of the following will have least value in ohms-

- a.) Resistance
- b.) Reactance
- c.) Impedance
- d.) None

2 Oscillator crystal are made of –

- a.) Silicon
- b.) Germanium
- c.) Quartz
- d.) None

3. For small size, high frequency coils, the most common core material is-

- a.) Air
- b.) Ferrite

- c.) Powdered ion
- d.) Steel

4. If we have a parallel plate capacitor of plate area 'A' and plate separation t and having a capacity C and a metallic plate r of area A and of negligible thickness is introduced in the capacitor at a distance from either of the two plates as shown in the given figure then the capacity of the capacitor will become –

- a.)
- b.)C
- c.)2C
- d.)4C

5. A superconductor is a –

- a.)A material showing perfect conductivity and Meissner effect below a critical temperature
- b.)A conductor having zero resistance
- c.)A perfect conductor with highest di-magnetic susceptibility
- d.)A perfect conductor which becomes resistance when the current density through it exceeds a critical value

6. When an inductor tunes at 200 KHz with 624 pF capacitor and at 600 KHz with 60.4 pF capacitor then the self capacitance of the inductor would be –

- a)8.05 pF
- b)10.05pF
- c.)16.01pF
- d.)20.01pF

7. Sparking occur when a load is switched off because the circuit has high –

- a.)Inductance
- b.)Capacitance
- c.)Resistance
- d.)None

8. Sparking between contacts can be reduced by inserting a –

- a.)Resistance in the line
- b.)Capacitor in series with contacts
- c.)Capacitor in parallel with contacts
- d.)None

9. RF amplifier of an A.M. receiver is normally biased in –

- a.)Class 'A'
- b.)Class 'b'
- c.)Class 'C'
- d.)None

10. The value of gate voltage for the operation of enhancement of only N channel MOSFET has to be –
- a.)High positive
 - b.)High negative
 - c.)Low positive
 - d.)Zero
11. The input gate current of a FET is –
- a.)a few microamperes
 - b.)negligibly small
 - c.)a few milliamperes
 - d.)a few amperes
12. In the following fig. with $R = 30k$, the value of current through 2 K resistor is –
- a.)25 mA
 - b.)40 mA
 - c.)25/16 mA
 - d.)10 mA
13. A step recovery diode –
- a.)has on extremely short recovery time
 - b.)conducts equally well in both directions
 - c.)is mainly used as a harmonic generator
 - d.)is an ideal rectifiers of high frequency signals
14. In order to get maximum undistorted output signal from CE amplifier with $V_{CC} 10V$, the value of $V_{CE} (Q)$ should be approximately-
- a.)0.1V
 - b.)5V
 - c.)10V
 - d) V
15. In a FET the electrode, which corresponds to collector in bipolar transistor, is –
- a.)source
 - b.)drain
 - c.)gate
 - d.)none
16. The device which acts like an NPN and a PNP transistor connected base to base and emitter to collector is –
- a.)Triac
 - b.)UJT
 - c.)Diac
 - d.)SCR

17. A typical optical fibre has –

- a.) High refractive index core and low refractive index cladding
- b.) Low refractive index core and high refractive index cladding
- c.) Both a and b
- d.) None

18. In the following figure circuit diagram of an op-amp based is shown. The ratio is equal to –

- a.) 9
- b.) 11
- c.) 10
- d.) 21

19. When a loud speaker is connected across the terminals A and B of the network shown in the fig. then its impedance to obtain maximum power dissipation in it will be –

- a.) $3 - j1$
- b.) $3 + j9$
- c.) $7.5 + j 2.5$
- d.) $7.5 - j 2.5$

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20. In the lattice network, the value of R for the maximum power transfer to the load –

- a.) 5
- b.) 6.5
- c.) 8
- d.) 9

21. For a lossy transmission line short circuited at the receiving end, the input impedance is given by (Z_0 is the characteristic impedance, γ is the propagation constant and l is the length of the line-

- a.) $Z_0 \cot \gamma l$
- b.) $Z_0 \cot \gamma l$
- c.) $Z_0 \tan \gamma l$
- d.) $Z_0 \tan \gamma l$

22. The approximate thickness of the radome wall should be –

- a.) l
- b.) $l/4$
- c.) $l/2$
- d.) $l/$

23. A relatively permanent information is stored in

- a.) ROM
- b.) RAM
- c.) PROM
- d.) Volatile memory

24. The rise time of the RC network shown in the given figure is approximately equal to –

- b.) RC
- c.) 2RC
- d.) 4RC

25. If in the network shown in the fig. initially a steady state is attained by closing the switch 's' and then if the switch is opened at $t = 0$, then the current $i(t)$ through the inductor will be –

- a.) $\cos 50tA$
- b.) $2A$
- c.) $2\cos 100tA$
- d.) $2\sin 50tA$

26. When the p network of figure – I and T-network of figure – II are equivalent then the values of R_1 , R_2 and R_3 will be respectively –

- a.) 9W, 6W and 6W
- b.) 6W, 6W and 9W
- c.) 9W, 6W and 9W
- d.) 6W, 9W and 6W

27. When the impedance matrices of a two port networks are given by and , then if these two networks are connected in series then the impedance matrix of the resulting two-port network will be –

- d.) indeterminate

28. Joule/coulomb is the unit of -

- a.) Electric field potential
- b.) Potential
- c.) Charge
- d.) None of the above

29. The electric field line and equipotential lines-

- a.) Are parallel to each other
- b.) Are one and same
- c.) Cut each other orthogonally
- d.) Can be inclined to each other at any angle

30. For a lossy transmission line short circuited at the receiving end, the input impedance is given by (When Z_0 is the characteristic impedance γ is the propagation constant and L is the length of the line

31. When two equal positive point charges are placed along X- axis at X_1 and $-X_1$ respectively then the electric field vector at a point P on the positive Y-axis will be directed-

- a.) In the +x direction

- b.) In the $-x$ direction
- c.) In the $+y$ direction
- d.) In the $-y$ direction

32. The directions of \mathbf{E} and \mathbf{H} in TEM mode transmission line with respect to the direction of propagation are-

- a.) Both \mathbf{E} and \mathbf{H} are transverse to the direction of propagation
- b.) \mathbf{E} is and \mathbf{H} are transverse and \mathbf{H} has a component in the direction of propagation
- c.) \mathbf{E} is entirely transverse and \mathbf{H} has a component in the direction of propagation
- d.) \mathbf{E} is entirely transverse and \mathbf{H} has a component in the direction of propagation

33. The lowest TM mode in a rectangular waveguide of cross-section $a \times b$ with $a > b$ will be-

- a.) TM₀₁
- b.) TE₁₀
- c.) TM₁₁
- d.) TE₁₁

34. When a transmitter in a free space radiates a mean power of 'p' watts uniformly in all directions then at a distance d sufficiently far from the source in plane the electric field E should be related to p and d as –

35. When a dipole antenna was radiating with some excitation in free space radiating a certain amount of the power v if then this antenna is immersed in a lake where water is non-dissipative but has a dielectric constant of 81, then the radiated power with the same excitation will be

- a.) Decrease to finite non-zero value
- b.) Remain the same
- c.) Increase
- d.) Decrease to zero

36. When a $(75 - j40)\Omega$ load is connected to a coaxial line of $Z_0 = 75 \Omega$ at 6MHz then the load matching on the line can be accomplished by connecting-

- a.) A short-circuited stub at the load
- b.) An inductance at the load
- c.) A short-circuited stub at a specific distance from the load
- d.) none of the above

37. As compared to analog multimeters, digital multimeters are –

- a.) less accurate
- b.) more accurate
- c.) equally accurate
- d.) none.

38. When a signal of 10 mV at 75 MHz is to be measured then which of the following instruments can be used –

- a.) VTVM
- b.) Cathode ray oscilloscope
- c.) Moving iron voltmeter
- d.) Digital multimeter

39. Which of the following statement is true about two wattmeter method for power measurement in three phase current ?

- a.) power can be measured using two wattmeter method only for star connected three phase circuits.
- b.) when two meter show identical readings, in the power factor is 0.5.
- c.) when power factor is unit, one of the wattmeter reads zero
- d.) when the reading of the two wattmeters are equal but of opposite sign, then the power factor is zero –

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40. When a capacitance transducer has two plates of area 5cm² each, separated by an air gap of 2mm than the displacement sensitivity in pf/cm due to gap change would be –

- a.) 11.1
- b.) 44.2
- c.) 52.3
- d.) 66.3

41. The Q of a radio coil –

- a.) is independent of frequency
- b.) increases monotonically as frequency increases
- c.) decreases monotonically as frequency increases
- d.) increases upto a certain frequency and then decreases beyond that frequency

42. When a generator of internal impedance and operating at 1GHz feeds a load via a coaxial line of characteristic impedance 50 ohm then the voltage wave ratio on the feed line is –

- a.) 0.5
- b.) 1.5
- c.) 2.5
- d.) 1.75

43. The coding system typically used in digital telemetry is –

- a.) PPM (pulse position modulation)
- b.) PAM (pulse amplitude modulation)
- c.) PCM (pulse code modulation)
- d.) PDM (pulse duration modulation)

44. Radiation pyrometers are used for the measurement of temperature in the range of –

- a.) -2000C to 5000C
- b.) 00C to 5000C

- c.) 5000C to 12000C
- d.) 12000C to 25000C

45. In the given figure band structure is shown. It is of –

- a.) Gallium Arsenide (GaAs)
- b.) Silicon (Si)
- c.) Copper (Cu)
- d.) Germanium (Ge)

46. When anode is positive with respect to cathode in an SCR, the numbers of blocked p-n junction is –

- a.) 1
- b.) 2
- c.) 3
- d.) 4

47. The circuit symbol for a GTO is

- a. b.
- c. d.

48. In the given fig. mark out the type of Cyclo converters

- a.) 1 phase to 1 phase with continuous conduction
- b.) 1 phase to 1 phase with discontinuous conduction
- c.) step up device
- d.) 3 phase to 1 phase device

49. In the given fig. A=1, C=5, m H and C=20 m F, C is initially charged to 200 V. After the switch.

S is closed at $t = 0$ the maximum value of current and the time at which it reaches this value are respectively.

- a.) 400 A, 15.707 mS
- b.) 50 A, 30 mS
- c.) 100 A, 62.828 mS
- d.) 400 A, 31.414 mS

50. In the given circuit the maximum current in the main SCR M can be-

- a.) 200 A
- b.) 170.7 A
- c.) 141.4 A
- d.) 70.7 A

51. The transfer function of an amplifier is given by
The high 3-db frequency of the amplifier will approximately

- a.) 5850 KHZ
- b.) 585 KHZ
- c.) 5850 HZ
- d.) 585HZ

52. In comparison to full wave rectifier with two diodes the four diode bridge rectifier has the dominant advantage of -

- a.) Higher current carrying
- b.) Lower ripple factor
- c.) Higher efficiency
- d.) Lower peak increase voltage require

53. Power output increase in a class-c amplifier-

- a.) If the conduction angle decrease
- b.) If the conduction angle increase
- c.) Are not governed by the conduction angle
- d.) None of the above

54. A transistor with $h_{ie} = 1.5 \text{ k}$ and $h_{fe} = 75$ is used in an emitter follower circuit where R_1 and R_2 are used for normal biasing . Approximate value of it's current amplification is-

- a.) 75
- b.) 76
- c.) 75/76
- d.) -75

55. Amplifier of class B has high theoretical efficiency of 78.5 percent because-

- a.) It is biased almost to saturation
- b.) Its quiescent current is low
- c.) It's output is an exact replica of it's input
- d.) It is biased well below cut off

56. The coupling that produces minimum interference with frequency response is-

- a.) Direct coupling
- b.) Impedance coupling
- c.) R C coupling
- d.) Transformer coupling

57. In the circuit shown in the given figure R_f provides

- a.) Current series feedback
- b.) Current shunt feedback
- c.) Voltage series feedback
- d.) Voltage shunt feedback

58. Mark the correct relation for the junction transistor

59. Data in the serial form can be converted into parallel form by using –

- a.) PISO shift register
- b.) SOIP shift register
- c.) SIPO shift register
- d.) POIS shift register

60. PROMs are used to store-

- a.) bulk information
- b.) information to be accessed rarely
- c.) sequence information
- d.) relatively permanent information

61. The horizontal axis in a 3 bit unipolar D/A converter represents-

- a.) Output bit combination
- b.) analog output voltage
- c.) input bit combination
- d.) none of the above

62. 'Not allowed' condition in NAND gate SR flip flop is –

- a.) $s = 0, R = 0$
- b.) $s = 1, R = 1$
- c.) $s = 0, R = 1$
- d.) $s = 1, R = 0$

63. Name the fastest logic family-

- a) TTL
- b. RTL
- c.) DCTL
- d.) ECL

64. Equation corresponding to De Morgan's theorem in Boolean Algebra is –

- a.) $(A+B)(A+B) = AA + AB + BA + BB$
- c.) $A + AB = A$
- d.) None of the above

65. In the given fig find radix of the system –

- a.) 2 b.) 4
- c.) 6
- d.) 8

66. Modems are used for data transmission telephone lines to –

- a.) increase the transmission capacity
- b) improve noise performance
- c.) incorporate error control coding
- d.) eliminate dc component in the transmitted signal

67. The figure of a control system is shown. The maximum value of gain K for which the system is stable is-

- a.)
- b.) 3
- c.) 4
- d.) 5

68. Identify the example of open-loop system-

- a.) A windscreen wiper
- b.) Aqualung
- c.) Respiratory system of an animal
- d.) A system for controlling Anti-rocket missiles.

69. Consider the following expressions indicating the step or impulse response of an initially relaxed control system-

- 1. $(5 - 4e^{-2t}) u(t)$
- 2. $(e^{-2t} + 5) u(t)$
- 3. $V(t) + 8e^{-2t} u(t)$
- 4. $V(t) + 4e^{-2t} 4(t)$

Those which correspond to the step and impulse response of the same system include-

- a.) 1&3
- b.) 1&4
- c.) 2&4
- d.) 1&4

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70. A system is described by

To test its stability by Lyapunov's method the following V functions are considered.

Mark the most suitable V-function in this case-

- a.) Only V1
- b.) Only V2
- c.) Both V1 and V2
- d.) Neither V1 nor v2

71. Identify the polar plot of a typical type zero system with open loop transfer function

72. The scattering matrix of a magic -tee shown in the given figure is-

73. Which is the following relate to rational transfer function of a system-

- 1. Ratio of Fourier transform of output to input with zero initial conditions.
- 2. Ratio of Laplace transform of output to input with zero initial conditions.
- 3. Laplace transform of system impulse response.
- 4. Laplace transform of system unit step response select the correct answer using the codes given below.

Codes

- a.) 1 and 4
- b.) 2 and 3

- c.) 1 and 3
- d.) 2 and 4

74. For the signal $g(t) = 10 \cos(50\pi t) \cos^2(150\pi t)$

The Nyquist sampling rate in t seconds is

- a.) 150 samples per second
- b.) 200 samples per second
- c.) 300 samples per second
- d.) 350 samples per second

75. In the case of a 70 MHz 1F carrier for a transponder band width of 36 MHz; energy must lie between – MHz.

- a.) 34 and 106
- b.) 52 and 88
- c.) 106 and 142
- d.) 34 and 142

76. Radar used to eliminate clutter in navigational application is –

- a.) Pulse radar
- b.) Tracking radar
- c.) MTI radar
- d.) Mono pulse radar

77. The 1.55 μm window is not yet in use with fiber optic systems because –

- a.) The attenuation is higher than at 0.85 μm
- b.) The attenuation is higher than at 1.3 μm
- c.) Suitable laser devices have not yet been developed
- d.) It does not lend itself to wavelength multiplexing

78. Pre-emphasis in FM systems involves-

- a.) Compression of the modulating signal
- b.) Expansion of the modulating signal
- c.) Amplification of lower frequency components of the modulating signal.
- d.) Amplification of higher frequency components of the modulating signal.

79. In a terrestrial microwave system transmission of signals is achieved through-

- a.) reflection from the ionosphere
- b.) line of sight mode
- c.) reflection from the ground
- d.) diffraction from the stratosphere.

80. Casse grain feed is used with a parabolic reflector to

- a.) increase the gain of the system
- b.) increase the bandwidth of the system
- c.) reduce the size of the main reflector
- d.) allow the feed to be placed at a convenient point.

81. In most microwave communication link rain drop attenuation is caused due to-
- scattering of microwaves by water drops of specific size.
 - scattering of microwaves by a collection of droplets acting as a single body.
 - absorption of microwaves by water and consequent heating of the liquid
 - absorption of the microwaves by water vapor in the atmosphere.
82. Circuit in the given figure represents. –
- an astable multivibrator
 - A monostable multivibrator
 - Voltage controlled oscillator
 - Ramp generator
83. $\nabla \cdot \mathbf{D} = \rho$ is-
- Maxwell's 1st equation
 - Maxwell's II equation
 - Maxwell's III equation
 - Maxwell's IV equation
84. In a rectangular wave-guide which TM mode exists-
- TM₀₀
 - TM₀₁
 - Tm₁₀
 - TM₁₁
85. In directional coupler a portion of power two verry fram port 1) to port 2) is coupled to.
- port 4
 - port 3
 - port 2.
 - port 3 & 4.
86. For high power i.e. 10 w to 50 kw measurement –
- Barometer are used
 - Thermistors are used
 - Calorimetric technique
 - Calorimetric watt meter technique used
87. The difference between TWT & klystron is –
- In TWT electrons are in contact with RF field for long time & in klystron for short time
 - In klystron electrons are in contact with RF field for long time & in TWT for short time
 - In klystron there is no contact in RF field & electrons while in TWT there is contact
 - In TWT phase is no contact is RF field & electrons while in klystron there is contact

88. Which one is most suitable for transmission through wave guide-

- a.) Horn antennas
- b.) Bi-conical antennas
- c.) helical antenna
- d. Discone

89. The skip distance of microwave is given by –

- a.)
- b.)
- c.)
- d.)

90. How many general purpose registers 8085mp-

- a.) 4
- b.) 6
- c.) 8
- c.) 10

91. 8085 mP has no. of addressing modes-

- a.) 2
- b.) 3
- c.) 4
- d.) 5

92. What will be status of z and c y flag after execution of SUB A instruction

- a.) $z = 0, cy = 0$
- b.) $z = 0, cy = 1$
- c.) $z = 1, cy = 0$
- d.) $z = 1, cy = 1$

93. Microprocessor accept interrupt only if.

- a.) interrupt flip flop disabled.
- b.) when INTA signal is low.
- c. interrupt flip flop enabled.
- d.) none of above.

94. Microprogramming is a technique

- a.) for programming the microprocessor
- b.) for writing small programs efficiently
- c.) for programming the control steps of computer
- d.) for programming o/p / i/p

95. High level programs like C are converted into machine language with the help of

- a.) interpreter
- b.) compiler
- c.) operating
- d.) system

96. $(10110011)_2 = (?)_8$

- a.) 253
- b.) 263
- c.) 273
- d.) 283

97. A Not gate at the output of AND gate converts AND gate into-

- a.) NAND
- b.) NOR
- c.) AND
- d.) NOPE.

98. The O/P of a logic gate is the gate must be-

- a.) AND
- b.) OR
- c.) NAND
- d.) X-OR

99. 38. A symbol of JK flip flop is-

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100. A demultiplexer-

- a.) has multiple i/p and single o/p
- b.) has multiple i/p and multiple o/p
- c.) has multiple i/p and multiple o/p
- d.) has single i/p and single o/p

101. Which of the following best describes the author's attitude toward fairy tales ?

- a.) fascination
- b.) open approval.
- c.) Indulgent tolerance.
- d.) Scornful.

102. What type of sentence is this ?

Hurray! We won the match

- a.) Exclamatory
- b.) assertive
- c.) Negative
- d.) Affirmative

103. Before which of the following word will you put 'a'

- a.) hour
- b.) M. A.
- c.) Umbrella
- d.) Man

104. The noun form of 'fresh' is –

- a.) freshly
- b.) freshen
- c.) fresheners
- d.) fresh itself

105. The word 'clang' is an example of –

- a.) Simile
- b.) inversion
- c.) onomatopoeia
- d.) irony

106. The Forbes magazine acclaimed Azim Premji as richest India's is the chairman of-

- a.) PentaFour software
- b.) Infosys
- c.) IBM
- d.) Wipro

107. Bharat Ratna award for the year 2001 goes to-

- a.) Lata Mangeshkar and Zakeer Hussain
- b.) Zakeer Hussain and Bismillah Khan
- c.) Bismillah Khan and Lata Mangeshkar
- d.) Lata Mangeshkar and Ustad Amzad Ali Khan

108. Mr. George W-Bush takes over as ——— President of the united states of America succeeding Mr. Bill Clinton-

- a.) 42nd
- b.) 43rd
- c.) 40th
- d.) 45th

109. New Chief Minister of Pondicherry is-

- a.) T. Venkat Naidu
- b.) K. Hari Harh
- c.) N. Rengaswany
- d.) M. Mudliar

110. No court has the jurisdiction to interfere with the election process once set in motion by the Election commission. This is enshrined in Article-

- a.) 311
- b.) 329
- c.) 356
- d.) 365

111. Ostrich is a-

- a.) Running bird

- b.) Flying bird
- c.) Swimming bird
- d.) Migratory bird

112. The main atmospheric gas responsible for green house is-

- a.) Oxygen
- b.) Nitrogen
- c.) Ozone
- d.) Carbon-dioxide

113. Which of the following is not a Kharif Crop-

- a.) Rice
- b.) groundnut
- c.) Sugarcane
- d.) gram

114. The function of World Bank is to-

- a.) Help in reconstruction and development of world economy
- b.) Facilitate poor countries to trade on concessional rates
- c.) Promote growth of international trade and equilibrium in balance of payments
- d.) Ease trade barriers and establish rule of fair trade

115. Speed of sound is maximum in-

- a.) Water
- b.) Air
- c.) Steel
- d.) Vacuum

116. "Long years ago we made a trust with destiny." Whose words are these-

- a.) Subhash Chandra Bose
- b.) Jawaharlal Nehru
- c.) Lajpat Rai
- d.) Bhagat Singh

117. Durand cup is associated with-

- a.) Hockey
- b.) Tennis
- c.) Football
- d.) Badminton

118. Rabindranath Tagore was awarded the Nobel Prize in literature in the year.

- a.) 1908
- b.) 1910
- c.) 1913
- d.) 1914

119. India successfully conducted its first underground nuclear experiment at Pokhran in Rajasthan on-

- a.) May 18, 1975
- b.) May 20, 1974
- c.) May 17, 1974
- d.) May 17, 1974

120. An emergency loan of \$ 500 million to help reconstruct infrastructure in earth quake devastated Gujarat approved by-

- a.) Asian development Bank
- b.) World Bank
- c.) Swiss Bank
- d.) Reserve Bank of India

PART 1 GENERAL ABILITY

1) Operation Flood is Related To

ANS: Production of Milk

2) Capital of DaDra Nagar Haveli

ANS: Silvassa

3) Sugar Bowl Of India

ANS: [Uttar Pradesh](#)

4) Minimum Age To Become President of India

ANS: 35 year

5) [BANKER](#)

OF BANK

ANS: RBI

6) Oldest Mountain In India

ANS: Aravali

7) Monsoon affected State

ANS: Orissa

8) Vidya Sagar Setu

ANS: Hooghly river

9) Period of Rajya Sabha

ANS: 6 year

- 10) Our Indian Constitution pass By RAJYA SABHA
ANS: 26 NOVEMBER 1949

PART 2 BASIC ENGINEERING

- 1) A+A(BAR)
ANS: 1

- 2) A+AB
ANS:A

- 3) FIND THE GATE

ANS: A B Y
0 1 1
1 0 1
1 1 0

- 4) $(3AB)_{16} = 2979$

- 5) O/P of EXNOR Gate

ANS : A B Y
0 0 1
0 1 0
1 0 0
1 1 1

- 6) ASCII is a
ANS: 7 unit Code

- 7) In LASER " S" Stands for
ANS: STIMULATED

- 8) Energy Band GAp of Silicon
ANS: 1.1 ev

- 9) Wave Guide act as
ANS: High Pass Filter

- 10) Bode Plot Is applicable to
ANS: Minimum Phase Network

- 11) Efficiency of CLASS B PUSH PULL Amplifier
ANS: 78.5%

12) Ideal Voltage Controlled Current source has
ANS: $R_i = \text{infinity}$ $R_o = \text{ZERO}$

13) Break Down Voltage of SILICON
ANS: 0.6

14) A Darling Pair Consist of
ANS: Both Collector

15) Sampling Theorem Fibd application In
ANS: PCM

16) Poynting Vector
ANS: $P = E * H$

17) The Speaker used in Telephone RX is
ANS: Fixed Coil Type

18) Measurment of High Q Inductance
AND: HAYS BRIDGE

19) Measurment of Very High Resistance
ANS: MEGGER