BHEL Electrical Model Question Papers

 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

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

In comparison to full wave rectifier with two diodes the four divide bridge rectifier has the dominant advantage of -
a). Higher current carrying
b.)Lower ripple factor
c.) Higher efficiency
d.)Lower peak increase voltage require

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

A transistor with hie = 1.5 k and hfe = 75 is used in an emitter follower circuit where R1 and R2 are used for normal biasing . Approximate value of it's current amplification is- a.)75b.)76 c.)75/76
d.)-75
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

The coupling that produces minimum interference with frequency response is-
a.) Direct coupling
b.)Impedance coupling
c.) R C coupling
d.)Transformer coupling

In the circuit shown in the given figure Rf provides
a.) Current series feedback
b.)Current shunt feedback
c.) Voltage series feedback
d.)Voltage shunt feedback

Mark the correct relation for the junction transistor

Data in the serial form can be converted into parallel form by using –a.) PISO shift registerb.) SOIP shift register c.) SIPO shift register
d.) POIS shift register

PROMs are used to store-a.) bulk informationb.) information to be accessed rarely c.) sequence information
d.) relatively permanent information

The horizontal axis in a 3 bit unipolar D/A converter represents-a.) Output bit combinationb.) analog output voltage c.) input bit combination
d.) none of the above

'Not allowed' condition in NAND gate SR flip flop is –a.) s = 0, R = 0b.) s = 1, R = 1 c.) s = 0, R = 1
d.) s = 1, R = 0

Name the fastest logic family-a) TTLb.) RTL c.) DCTL
d.) ECL

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

In the given fig find radix of the system –
a.) 2
b.) 4
c.) 6
d.) 8

Modems are used for data transmission telephone lines to –a.) increase the transmission capacityb) improve noice performance c.) incorporate error control coding
d.) eliminate dc component in the transmitted signal

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

Identify the example of open-loop system-a.) A windscreen wiperb.) Aqualung c.) Respiratory system of an animal

d.) A system for controlling Anti-rocket missiles.

Consider the following expressions indicating the step or impulse response of an initially relaxed control system-1. (5 – 4e-2+) 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

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

Identity the polar plot of a typical type zero system with open loop transfer function

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

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

For the signal g (t) – 10 cos (50 pt) cos2 (150at)The Nyquist sampling state in t seconds isa.) 150 samples per second b.) 200 samples per second
c.) 300 samples per second
d.) 350 samples per second

In the case of a 70 MHz 1F carries for a transponder band width of 36 MHz; energy must lie between – MHz.a.) 34 and 106b.) 52. And 88 c.) 106 and 142
d.) 34 and 142

Radar used to eliminate clutter in navigational application is –a.) Pulse radarb.) Tracking radar c.) MTI radar
d.) Mono pulse radar

The 1.55 mm windows is not yet in use with fiber optic systems because –a.) The attenuation is higher than at 0.85 mm b) The attenuation is higher than at 1.3mm c.) Suitable laser devices have not yet been developed
d.) It does not lend itself to wavelength multiplexing

Pre-emphasis in FM systems involves-a.) Compression of the modulating signalb.) 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.

In a terrestrial microwave system transmission of signals is achieved through-a.) reflection from the ionosphereb.) line of sight mode
c) reflection from the ground
d.) diffraction from the stratosphere.

Casse grain feed is used with a parabolic reflector toa.) increase the gain of the systemb). 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.

In most microwave communication link rain drop attenuation is caused due to-a.) scattering of microwaves by water drops of specific size.b) scattering of microwaves by a collection of droplets acing as a single body. c.) absorption of microwaves by water and consequent heating of the liquid
d.) absorption of the microwaves by water vapor in the atmosphere.

Circuit in the given figure represents. – a.) an astable multivibrator b.) A monostable multivibrator
c.) Voltage controlled oscillator
d.) Ramp generator

D = r is-a.) Maxwell's 1st equationb.) Maxwell's II equation c.) Maxwell's III equation

d.) Maxwell's IV equation

In a rectangular wave-guide which TM mode exists-a.) TM00b.) TM01

c.) Tm10

d.) TM11

In directional coupler a portion of power two velliry fram port 1) to port 2) is coupled to.a). port 4b).
port 3 c.) port 2.

d.) port 3 & 4.

For high power i.e. 10 w to 50 kw measurement –

a.) Barometer are used

b.) Thermisters are used

c.) Calorimetric technique

d.) Calorimetric watt meter technique used

The difference between TWT & klystron is –

a.) In TWT electrons are in contact with RF field for long time & in klystron for short time

b.) In klystron electrons are in contact with RF field for long time & in TWT for short time

c.) In klystron there is no contact in RF field & electrons while in TWT there is contact

d.) In TWT phase is no contact is RF field & electrons while in klystron there is contact

Which one is most suitable for transmission through wave guide-

a.) Hown antennas

b.) Bioconical antennas

c.) helical antenna

d.)Discone

The skip distance of microwave is given by –

a.)

b.)

c.)

d.)

How many general purpose registers 8085mp-

a.) 4

b.) 6

c.) 8

c.) 10

8085 mP has no. of addressing modes-
a.) 2
b.) 3
c.) 4
d.) 5

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

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.

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

High level programs like C are converted into machine language with the help ofa.) interpreterb.)
compiler c.) operating
d.) system
(10110011)2 = (?)8a.) 253b.) 263 c.) 273
d.) 283

A Not gate at the output of AND gate converts AND gate into-a.) NANDb.) NOR c.) AND
d.) NOPE.

The O/P of a logic gate is the gate must be-a.) ANDb.) OR c.) NAND
d.) X-OR

A symbol of JK flip flop is-

A demultiplener-a.) has multiple i/p and single o/pb.) 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

Which of the following best describes the authour`s attitude toward fairy tales ?a.) fascinationb.) open approval. c.) Indulgent tolerance.
d.) Scornful.

What type of sentence is this ?Hurray! We won the matcha.) Exclamatory b.) assertive
c.) Negative
d.) Affirmative

Before which of the following word will you put 'a'a.) hourb.) M. A. c.) Umbrella
d.) Man

The noun form of 'fresh' is –a.) freshlyb.) freshen c.) fresheners
d.) fresh itself

The word 'clang' is an example of –a.) Simileb.) inversion c.) onomatopoeia
d.) irony

The Forbes magazine acclaimed Azim Premji as richest India's is the chairman of-a.) Pentafour softwareb) Infosys c.) IBM
d.) Wipro

Bharat Ratna award for the year 2001 goes to-a.) Lata Mangesb:akeer Hussainb.) Zakeer Hussain and Bismillah Khan c.) Bismillah Khan and Lata Mangeshkar
d.) Lata Mangeshkar and Ustad Amzad Ali Khan

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

New Chief Minister of Pondicherry is-a.) T. Venkat Naidub.) K. Hari Harh c.) N. Rengaswany
d.) M. Mudliar

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

Ostrich is a-a.) Running birdb.) Flying bird c) Swimming bird
d.) Migratory bird

The main atmospheric gas responsible for green house is-a.) Oxygenb.) Nitrogen c.) Ozone
d.) Carbon-dioxide

Which of the following is not a Kharif Crop-a.) Riceb.) groundnut c.) Sugarcane
d.) gram

The function of World Bank is to-a.) Help in reconstruction and development of world economyb.) 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

Speed of sound is maximum in-a.)Waterb.) Air c.) Steel
d.) Vacuum

"Long years ago we made a trust with destiny." Whose words are these-a.) Subhash Chandra Boseb.) Jawaharlal Nehru c.) Lajpat Rai
d.) Bhagat Singh
Durand cup is associated with-a.) Hockeyb.) Tennis c.) Football
d.) Badminton

Rabindranath Tagore was awarded the Nobel Prize in literature in the year.a.) 1908b.) 1910 c.) 1913
d.) 1914

India successfully conducted its first underground nuclear experiment at Pokhran in Rajas than on-a.) May 18, 1975b.) May 20, 1974 c) May 17, 1974
d.) May 17, 1974

An emergency loan of $ 500 million to help reconstruct infrastructure in earth quake devastated Gujarat approved by-a.) Asian development Bankb.) World Bank c.) Swiss Bank
d.) Reserve Bank of India