Examination: **Ph.D. Electrical and Electronics Engineering**

Section 1 - Section 1

Question No.1 4.00

Bookmark

The emf induced in a DC shunt generator is 400 V. The armature resistance is 0.1 Ω. If the armature current is 200 A, then the terminal voltage will be

- 380 V
- 400 V
- 440 V
- 360 V

Question No.2 4.00

Bookmark

A power station has a maximum demand of 2500 kW and number of kWh generated per year is 45×10^5 . The load factor is

- 10.25%
- 41%
- 82%
- 20.50%

Question No.3 4.00

Bookmark

In moving iron instruments, eddy current damping cannot be used as

- They have a strong operating magnetic field
- They need a large damping force, which can only be provided by air friction.
- The introduction of a permanent magnet required for eddy current damping would distort the existing weak operating magnetic field.
- They are not normally used in vertical position

Question No.4 4.00

Bookmark

A single-phase half wave converter with freewheeling diode drives a separately excited dc motor at 900 rpm with firing angle 60^o. When this motor is fed from 1 phase full converter with a = 60^o, the motor speed would be

- 600 rpm
- 900 rpm
- 1200 rpm
- 1800 rpm

Question No.5 4.00

Bookmark

Dad often comes home late these days, _____?

- doesn't he?
- is it?
- does he?
- isn't it?

Question No.6 4.00

Bookmark

A three-phase cable is supplying 800 kW and 600 kVAr to an inductive load. It is intended to supply an additional resistive load of 100 kW through the same cable without increasing the heat dissipation in the cable, by providing a three-phase bank of capacitors connected in star across the load. Given the line voltage is 3.3 kV, 50 Hz,the capacitance per phase of the bank, expressed in microfarads, is

- 47
- 54
- 63
- 27

Question No.7 4.00

Bookmark

_____ she had been lied to, Sally got really angry.

- Having discovered
- Sally discovered
- If Sally discovered
- Sally when discovered

Question No.8 4.00

Bookmark

If P^{ir} is the power input to the rotor, w^{cu2} is the rotor copper loss, P^d is the mechanical power developed and s is the slip in a 3-phase Induction motor, then the ratio $P^{ir} : w^{cu2} : P^d$ is

- (1 - s) : s: 1

- s : (1 - s) : 1
- 1 : s : (1 - s)
- 1: (1-s) : s

Question No.9 4.00

Bookmark

Which of the following will be provided to reduce the harmonics on the ac side of an HVDC transmission line?

- Shunt capacitor
- Synchronous motors in over excited condition
- Shunt filters
- Static compensator

Question No.10 4.00

Bookmark

A starting torque of 80Nm is developed in an induction motor by an auto transformer starter with a tapping of 30%. If the tapping of auto transformer is 60%, then the starting torque will be

- 240 Nm
- 160 Nm
- 320 Nm
- 40 Nm

Question No.11 4.00

Bookmark

Choose the antonym of the italicized word.
The habit of *squandering* money should not be encouraged.

- discarding
- collecting
- saving
- hoarding

Question No.12 4.00

Bookmark

A 3-phase induction motor operating at a slip of 5% develops 20 kW rotor power output. What is the corresponding rotor copper loss (in Watts) in this operating condition?

- 1200
- 750
- 900
- 1050

Question No.13 4.00

Bookmark

The power consumed by a coil is 300 W when connected to a 30V dc source and 108 W when connected to a 30 V ac source. The reactance of the coil is

- 3 Ω
- 6.67 Ω
- 4 Ω
- 5 Ω

Question No.14 4.00

Bookmark

Choose the correct meaning of the italicized idiom.
The party in power *came down* on the side of a flexible and early economic policy to help the weaker sections.

- Decide to support
- Decide to go to the corner
- Decide to speak secretly
- Decide to rebuke severely

Question No.15 4.00

Bookmark

Consider the following statements made with respect to use of a freewheeling diode in bridge converter
(1) It prevents regeneration
(2) It reduces displacement factor
(3) It prevents discontinuous conduction of these,

- (1) and (3) are true but (2) is false
- All are true
- (2) and (3) are true but (1) is false

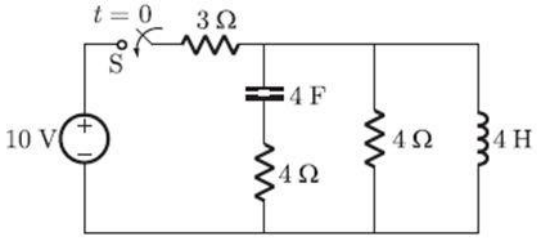
(2) and (3) are true but (1) is false

(1) and (2) are true but (3) is false

Question No.16 4.00

Bookmark

In the circuit shown in figure, the switch is closed at time (t=0). The voltage across the inductance at t= 0+ is



4V

8V

-V6

2V

Question No.17 4.00

Bookmark

One transformer has leakage impedance of 1+j4Ω and 3+j11Ω for its primary and secondary windings respectively. This transformer has

h.v primary

medium voltage primary

short circuited primary

l.v. primary

Question No.18 4.00

Bookmark

book : _____ : : comb : tooth

Knowledge

Cover

Title

Page

Question No.19 4.00

Bookmark

In synchronous motor, 'V' curves present the variation of

Field excitation with minimum power developed

Field excitation with stalling torque

Armature current with maximum power developed

Armature current with field excitation

Question No.20 4.00

Bookmark

Two parallel connected, three phase 50Hz, 11kV star connected synchronous machines A and B are operating as synchronous condensers. They together supply 50MVAR to a 11kV grid. Current supplied by both the machines are equal.Synchronous reactances of machine A and machine B are 1Ω and 3Ω respectively. Assuming the magnetic circuit to be linear, the ratio of excitation current of machine A to that of machine B is

0.1

0.2

0.7

0.5

Question No.21 4.00

Bookmark

A load is supplied by a 230V, 50Hz source. The active power P and the reactive power Q consumed by the load are such that 1kW≤P≤2kW and 1kVAR≤Q≤2kVAR. A capacitor connected across the load for power factor correction generates 1kVARreactive power. The worst case power factor after power factor correction is

1

0.707 lag

0.447 lag

0.894 lag

Question No.22 4.00

Bookmark

A 3Ø bridge inverter is used for controlling the speed of a squirrel cage induction motor. If frequency of supply voltage is decreased with
i) Constant supply voltage $V_1$1, starting torque Tst decreases
ii) Constant V_1, T_{st} increases
iii) Constant V_1/f_1, Tst increases

iii) Constant V_1/f_1, Tst increases
iv) Constant V_1/f_1, maximum torque Tem must remains constant
v) Constant V_1/f_1, Tet decreases
vi) Constant V_1/f_1 and at very low frequencies, Tem may decrease.
From these the correct statements are

- i,iv,v
- i,iii,vi
- ii,iii,iv,vi
- ii,iii,vi

Question No.23 4.00

Bookmark

In a 100 bus power system, there are 10 generators. In a particular iteration of Newton Raphson load flow technique (in polar coordinates), two of the PV buses are converted to PQ type. In this iteration,

- the number of unknown voltage angles remains unchanged and the number of unknown voltage magnitudes increases by two
- the number of unknown voltage angles remains unchanged and the number of unknown voltage magnitudes decreases by two
- the number of unknown voltage angles increases by two and the number of unknown voltage magnitudes increases by two
- the number of unknown voltage angles increases by two and the number of unknown voltage magnitudes decreases by two

Question No.24 4.00

Bookmark

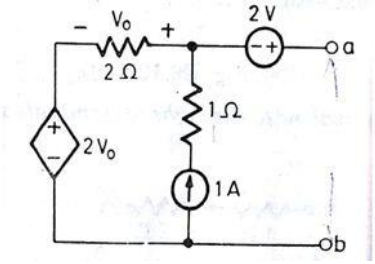
Synchronous machines are designed and constructed with less value of resistance and more synchronous reactance in order to have

- more synchronizing power
- more power handling capacity
- less power loss
- less voltage drop

Question No.25 4.00

Bookmark

Find the thevenin's resistance across the terminal a-b



- 20Ω
- 30Ω
- 10Ω
- 6 Ω

Question No.26 4.00

Bookmark

Select the Pair that best respresents the relationship that is given in the question:
Professor : Erudite

- Carpenter : Furniture
- Inventor : Imaginative
- Entrepreneur : Hardwork
- Mason : Architecure

Question No.27 4.00

Bookmark

A 20 kVA, 440 V / 220 V, 1-phase Transformer has winding resistances 0.09 Ω and 0.022 Ω. The total resistance referred to HV side is

- 0.0445 Ω
- 0.178 Ω
- 0.112 Ω
- 0.0955 Ω

Question No.28 4.00

Bookmark

The rights defined between injection and with draw points of the transmission grid

- Fixed transmission rights
- All the above
- Physical rights
- Financial rights

Question No.29 4.00

Bookmark

In a split phase motor, the running winding should have

- High resistance as well as high inductance
- Low resistance and high inductance
- Low resistance as well as low inductance
- High resistance and low inductance

Question No.30 4.00

Bookmark

Electric field inside a conductor is

- Unity
- Zero
- Infinity
- Proportional to the applied voltage/ surface area of the conductor

Question No.31 4.00

Bookmark

The theorem which states that in any linear, nonlinear, passive, active, time variant and time invariant network, the summation of instantaneous powers is zero will be called as

- Reciprocity theorem
- Superposition theorem
- Tellegen's theorem
- Compensation theorem

Question No.32 4.00

Bookmark

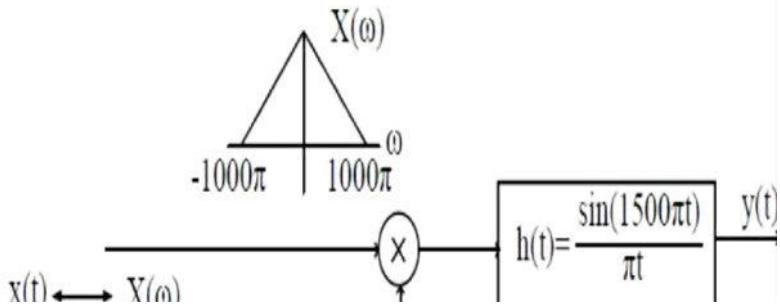
What should be the frequency modulation ratio (mf) for a 3-phase inverter if the m_f^{th} harmonic and its odd multiples are to be suppressed in the line-to-line voltages ?

- m_f should be even multiple of 3
- m_f should be odd
- m_f should be an odd multiple of 3
- m_f should be even

Question No.33 4.00

Bookmark

The output is to be sampled so as to reconstruct it from samples uniquely. The required minimum sampling rate is



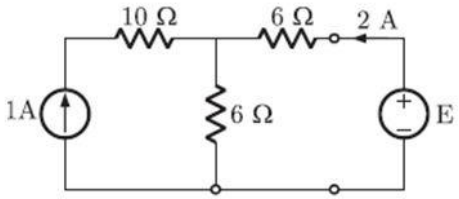
cos(1000πt)

- 2000 samples/s
- 3000 samples/s
- 1000 samples/s
- 1500 samples/s

Question No.34 4.00

Bookmark

In the figure shown below, the value of the voltage source E is



- 30V
- 24V
- 44V
- 12V

Question No.35 4.00

Bookmark

A battery charger can drive a current of 5A into a 1 Ω resistance connected at its output terminals. If it is able to charge an ideal 2 V battery at 7A rate, then Thevenin's equivalent will be

- 12.5 V in parallel with 1.5 Ω
- 7.5 in series with 0.5 Ω
- 7.5 V in parallel with 0.5 Ω
- 12.5 V in series with 1.5 Ω

Question No.36 4.00

Bookmark

Two dielectric materials of equal thickness of relative permittivities εr_1 (1.0) and εr_2 (5.0) are sandwiched between two parallel plate conductors. What is the ratio of electric field intensities E_1/E_2 = ?

- 25
- 5
- 1/5
- 1

Question No.37 4.00

Bookmark

It is important to realize that the ties that bind us together in common activity are so _____ that they can disappear at any moment.

- tenacious
- tentative
- restrictive
- tenuous

Question No.38 4.00

Bookmark

Study the following information carefully and answer the question below it

Lakshman passes through seven lanes to reach his school. He finds that 'Truth lane' is between his house and 'Lie lane'. The third lane from his school is 'Karma lane'. 'Dharma lane' is immediately before the 'Yog lane'. He passes 'Salvation lane' at the end, 'Lie lane' is between 'Truth lane' and 'Dharma lane', the sixth lane from his house is 'Devotion lane'.

How many lanes are there between 'Lie lane' and 'Devotion lane'?

- three
- five
- four
- two

Question No.39 4.00

Bookmark

The region of convergence of z-transform of the sequence $(5/6)^n u(n) - (6/5)^n u(-n-1)$ must be

- $5/6<|z|<6/5$
- $6/5<|z|<\infty$
- $|z|> 5/6$
- $|z|<5/6$

Question No.40 4.00

Bookmark

For a series R-C circuit, the power factor corresponding to maximum power is

- 0.5 lead
- 0.707 lag
- 0.5 lag
- 0.707 lead

Question No.41 4.00

Bookmark

Four ammeters M1, M2, M3 and M4 with the following specifications are available. (Full scale, accuracy value as percentage of FS) M1 = 20 ± 0.10; M2=10 ± 0.20; M3= 5 ± 0.50; and M4 = 1 ± 1.00 A current of 1 A is to be measured. To obtain minimum error in the reading one should select meter.

- M_4
- M_2
- M_3
- M_1

Question No.42 4.00

Bookmark

Which of the following circuit breakers has the lowest voltage range?

- SF_6 circuit breaker
- Tank type oil circuit breaker
- Air-blast circuit breaker
- Air-break circuit breaker

Question No.43 4.00

Bookmark

In a power transformer, the core loss is 50 W at 40 Hz, and 100 W at 60 Hz, under the condition of same maximum flux density in both cases. The core loss (in Watts) at 50 Hz will be

- 64
- 91
- 73
- 82

Question No.44 4.00

Bookmark

In cylindrical coordinate system, the potential produced by a uniform ring charge is given by , where is a continuous function of and . Let be the resulting electric field. Then the magnitude of

- is 0
- increases with

- decreases with
- is 3

Question No.45 4.00

Bookmark

Choose the best synonym of the italicized word.
Nobody knew that Sunil had a *sinister* design in marrying her.

- evil
- sinful
- murderous
- selfish

Question No.46 4.00

Bookmark

The full-load copper loss of a Transformer is 1200 W. The copper loss at half full-load will be

- 4800 W
- 1200 W
- 300 W
- 600 W

Question No.47 4.00

Bookmark

Which of the following data transfers is not possible in microprocessor ?

- I/O device to accumulator
- Memory to memory
- Memory to accumulator
- Accumulator to memory

Question No.48 4.00

Bookmark

The percentage resistance and reactance of a transformer are 2% and 4% respectively. The approximate regulation on full load at 0.8 pf lag is

- 6%
- 4%
- 8%
- 12%

Question No.49 4.00

Bookmark

If the electric flux density D = $(2y^2+z)$ ax +4xy ay-x az C/m^2, what is the volume charge density at (-1, 2, 3) ?

- -8 C/m^3
- -4 C/m^3
- 21 C/m^3
- 0 C/m^3

Question No.50 4.00

Bookmark

Study the following information carefully and answer the question below it:

P, Q, R, S T went on a picnic. P is son of Q but Q is not the father of P. R is the son of S, who is the brother of P. T is the wife of S.

How many males are present in the group?

- 3
- 4
- 1
- 2

Question No.51 4.00

Bookmark

Psychologist : Neurosis

- Dermatologist: Sprain
- Oncologist: Measles
- Opthamologist : Catract
- Kids : Pediatrician

Question No.52 4.00

Bookmark ☐

In a p–n junction diode under reverse bias, the magnitude of electric field is maximum at

- The edge of the depletion region on the p side
- The edge of the depletion region on the n side
- The centre of the depletion region on the n side
- The p–n junction

Question No.53 4.00

Bookmark ☐

The segment register, that is augmented with the instruction pointer to get 20 bit long physical address is:

- Data Segment
- Extra Segment
- Stack Segment
- Code Segment

Question No.54 4.00

Bookmark ☐

In an amplifier with a gain of 1000 without feedback and cut-off frequencies at 2 kHz and 20 kHz, negative feedback of 1% is employed. The cut-off frequencies with feedback would be

- 182 Hz and 22 kHz
- 182 Hz and 220 kHz
- 220 Hz and 22 kHz
- 220 kHz and 220 kHz

Question No.55 4.00

Bookmark ☐

The pick up value of a relay is 7.5 amps and fault current in relay coil is 30 amps. Its plug setting multiplier is

- 8 amps
- 2 amps
- 6 amps
- 4 amps

Question No.56 4.00

Bookmark ☐

The program segment:

```
        MVI C 07
Repeat: RRC
        DCR C
        JNZ Repeat
```

is equivalent to the single instruction:

- RLC
- RAL
- RAR
- RRC

Question No.57 4.00

Bookmark ☐

The gain and distortion of an amplifier are respectively 150 and 5%. When used with a 10% negative feedback the % distortion would be

- 8
- 9/16
- 5/16
- 6

Question No.58 4.00

Bookmark ☐

The graph of a network has 8 nodes and 5 independent loops. The number of branches of the graph is

- 12
- 11

- 13
- 14

Question No.59 4.00

Bookmark

Which of the following statements are true.
a. Elasticity in demand would slow down the rise in price
b. Elasticity in demand is beneficial in keeping the MCP lower
c. Elasticity in demand implies increase in price causes no change in demand

- a and b
- Only a
- a ,b and c
- Both a and c

Question No.60 4.00

Bookmark

The instruction RET executes with the following series of machine cycle

- Fetch, read, write
- Fetch, read
- Fetch, read, read
- Fetch, write, write

Question No.61 4.00

Bookmark

In a two-channel oscilloscope operating in x-y mode, two in-phase 50 Hz sinusoidal waveforms of equal amplitude are fed to the two channels.What will be the resultant pattern on the screen?

- An ellipse
- A parabola
- Straight line inclined at 45^{o} with respect to x-axis
- A circle

Question No.62 4.00

Bookmark

A 200/100 V, 50 Hz transformer is to be excited at 40 Hz from the 100 V side. For the exciting current to remain same, the applied voltage should be

- 150V
- 80V
- 125V
- 100V

Question No.63 4.00

Bookmark

For a four variable K-Map, if each cell is assigned one integer value in range 0-15 then which is the cells adjacent to the cell corresponding to decimal value 7?

- 3, 5, 6 and 8
- 3, 5, 6 and 15
- 3, 5, 10 and 11
- 4, 6, 8 and 15

Question No.64 4.00

Bookmark

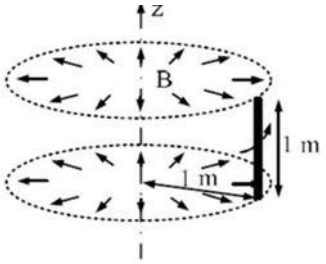
A phase controlled, single phase, full bridge converter is supplying a highly inductive DC load. The converter is fed from a 230V, 50Hz, AC source. The fundamental frequency in Hz of the voltage ripple on the DC side is

- 300
- 50
- 25
- 100

Question No.65 4.00

Bookmark

A rotating conductor of 1m length is placed in a radially outward (about the z axis) magnetic flux density (B) of 1 Tesla as shown in figure below.

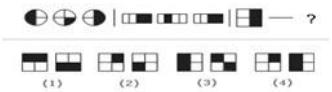


Conductor is parallel to and at 1m distance from the z axis. The speed of the conductor in rpm required to induce a voltage of 1V across it should be

- 100
- 1
- 9.5
- 5.4

Question No.66 4.00

Bookmark



- 1
- 3
- 2
- 4

Question No.67 4.00

Bookmark

Statement: Opening a Library in Achupatti will be a wastage.
Assumptions:
I. Inhabitants of Achupatti are illiterate.
II. Inhabitants of Achupatti are not interested in reading

- If both I and II are implicit
- If only assumption I is implicit
- If only assumption II is implicit
- If neither I nor II is implicit

Question No.68 4.00

Bookmark

Choose the correct meaning of the italicized idiom.
Raju has a very nice manner, but you would better take what he says *with a grain of salt.*

- To talk sensibly
- To listen to something with considerable doubt
- To criticize
- To complement

Question No.69 4.00

Bookmark

Force between two homopolar DC transmission lines carrying equal current is

- Infinite
- Repulsive
- Attractive

- Attractive
- Zero

Question No.70 4.00

Bookmark

Shaded pole 1-phase induction motor always runs in

- the direction from the unshaded to shaded part of the poles
- clockwise direction
- anticlockwise direction
- the direction from the shaded to unshaded part of the poles

Question No.71 4.00

Bookmark

The windings for an alternator are i) 36 slots,4-poles,span 1 to 3 ii) 72 slots, 6 Poles, span 1 to 10 iii) 96 slots, 6 poles, span 1 to 12. The windings having pitch factor of more than 0.9 are

- i and ii only
- i , ii and iii only
- ii and iii only
- i and iii only

Question No.72 4.00

Bookmark

A separately excited DC motor runs at 1000 rpm on no load when its armature terminals are connected to a 200V DC source and the rated voltage is applied to the field winding. The armature resistance of this motor is 1 Ω. The no-load armature current is negligible. With the motor developing its full load torque, the armature voltage is set so that the rotor speed is 500 rpm. When the load torque is reduced to 50% of the full load value under the same armature voltage conditions, the speed rises to 520 rpm. Neglecting the rotational losses, the full load armature current (in Ampere) is

- 6
- 9
- 8
- 7

Question No.73 4.00

Bookmark

A line commutated phase-controlled inverter is operating at its inverter limit. There can be a commutation failure if

- The voltage increases
- Both voltage and frequency change such that v/f is constant
- The frequency increases
- The frequency decreases

Question No.74 4.00

Bookmark

Based on the information given answer the following question.
1. In a family of six persons, there are people from three generations. Each has separate professions and they like different colours. There are two couples.
2. Shyam is an Engineer and his wife is not a doctor and she does not like Red colour.
3. Chartered Accountant likes green colour and his wife is a teacher.
4. Manisha is the mother-in-law of Sunita and she likes orange colour.
5. Vimal is the grand father of Tarun and tarun is the Principal and likes black colour.
6. Nyna is the grand daughter of Manisha and she likes blue colour. Nyna's Mother likes white colour.

Who is the Chartered Accountant?

- Manisha
- Vimal
- Nyna
- None of these

Question No.75 4.00

Bookmark

If the space phasor in space vector modulation traces a locus of a hexagon formed by joining the tips of the six possible phasors generated by an inverter. Which of the following statements are true?

- The fundamental is the highest possible for a given DC bus
- The inverter generates the (111) space phasor
- The inverter generate the (000) space phasor
- The inverter switches at the frequency of the fundamental

Question No.76 4.00

Bookmark

Consider a discrete time signal given by The region of convergence of its Z-transform would be

- the region inside the circle of radius 0.5 and centered at origin
- the entire Z plane.
- the region outside the circle of radius 0.25 and centered at origin
- the annular region between the two circles, both centered at origin and having radii 0.25 and 0.5

Question No.77 4.00

Bookmark

Two identical single phase bridge rectifier circuits are built A and B. A has a capacitance across the DC terminals to filter the voltage. While B has an L-C filter at the DC terminals. The THD of the line currents will be such that

- THDA ≥ THDB
- THDA = THDB
- THDA + THDB = 1
- THDA ≤ THDB

Question No.78 4.00

Bookmark

The Quality factor of the coil for the series resonant circuit having R=10 Ω; L=0.1 H, C=10μF is given by

- 10
- 20
- 100
- 30

Question No.79 4.00

Bookmark

In synchronous machines, the induced emf phasor

- leads the flux-phasor by 90^{o}
- lags the flux phasor by 90^{o}
- is in phase with flux phasor
- is in phase opposition to flux phasor

Question No.80 4.00

Bookmark

Find the odd one out?

- Circle : Arc
- Chair : Arm
- Cover : Page
- Flower : Petal

Question No.81 4.00

Bookmark

The μp8085 instruction, that affects the zero flag, but does not affect the carry flag is

- ADD M
- DCX H
- DCR C
- MOV B,C

Question No.82 4.00

Bookmark

If the number of turns of a long solenoid of length 'l' is doubled, the inductance will be

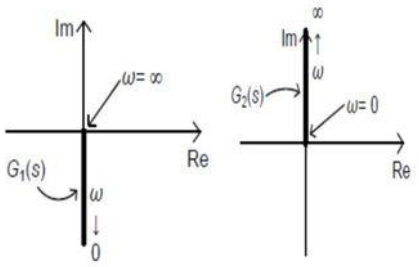
- Same

- Halved
- Doubled
- Quadruple

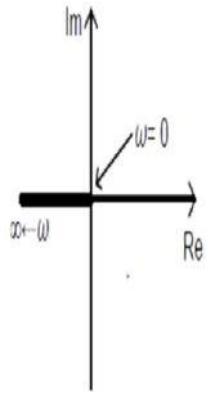
Question No.83 4.00

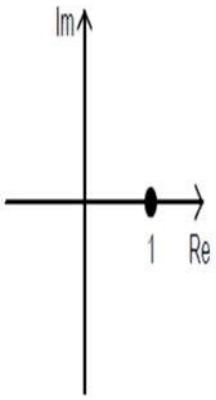
Bookmark

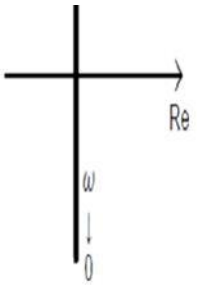
Nyquist plots of two functions $G_1(s)$ and $G_2(s)$ are shown in figure.

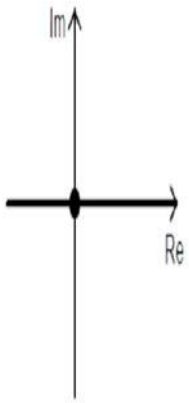


Nyquist plot of the product of $G_1(s)$ and $G_2(s)$ is









Question No.84 4.00

Bookmark

The accelerating power of a synchronous machine is equal to zero when

- $P_m = P_e$ and $d\delta/dt < 0$
- $P_m = P_e$ and $d\delta/dt > 0$
- $P_m = P_e$ and $d\delta/dt = 0$
- all of the above

Question No.85 4.00

Bookmark

The µc 8051 instruction 'JB $0DO_h$" is equivalent to the instruction

- JNC
- JZ
- JC
- JNZ

Question No.86 4.00

Bookmark

Consider a 4 point sequence x(0) = 8 x(1) = 4 x(2) = 8 x(3) = 0. The magnitude of DFT coefficient is

- {20,-j4,12,j4}
- {20,j4,12,-j4}
- {20,4,12,3}
- {20,-4,12,-4}

Question No.87 4.00

Bookmark

Study the following information carefully and answer the question below it

The Director of an MBA college has decided that six guest lectures on the topics of Motivation, Decision Making, Quality Circle, Assessment Centre, Leadership and Group Discussion are to be organised on each day from Monday to Sunday.
(i) One day there will be no lecture (Saturday is not that day), just before that day Group Discussion will be organised.
(ii) Motivation should be organised immediately after Assessment Centre.
(iii) Quality Circle should be organised on Wednesday and should not be followed by Group Discussion
(iv) Decision Making should be organised on Friday and there should be a gap of two days between Leadership and Group Discussion

On which day there is no lecture?

- Tuesday
- Wednesday

- Sunday
- Monday

Question No.88 4.00

Bookmark

A moving coil instrument of resistance 5 Ω requires a potential difference of 75 mV to give a full scale deflection. The value of shunt resistance needed to give a full scale deflection at 30 A is

- 9.95Ω
- 5Ω
- 9.99mΩ
- 2.5mΩ

Question No.89 4.00

Bookmark

The first and last critical frequencies of RC driving point impedance must be

- Pole and zero
- Zero and Zero
- Pole and pole
- Zero and pole

Question No.90 4.00

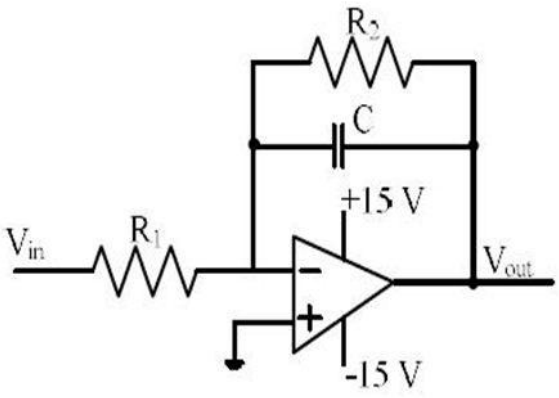
Bookmark

The status flag, that is available in µp 8085, but not in µc 8051 is

- AC-Auxiliary carry
- Carry flag
- Z-Zero flag
- O-Overflow flag

Question No.91 4.00

Bookmark



- band pass filter
- high pass filter
- notch filter
- low pass filter

Question No.92 4.00

Bookmark

Choose the correct meaning of the italicized idiom.
When Peter left he was extremely disappointed. I think he has *gone for good.*

- To a good place
- To a foreign country
- Permanently
- To seek good fortune

Question No.93 4.00

Bookmark

A 3-phase slip-ring induction motor can run at its synchronous speed when

- emf is injected in the rotor circuit
- external resistance is added in the rotor circuit
- its load is completely removed
- its supply voltage is increased

Question No.94 4.00

Bookmark

A 32 Point DFT requires _____

- 2048 multiplications

- 1024 multiplications
- 80 multiplication
- 512 multiplications

Question No.95 4.00

Bookmark

The impulse response h(n) of a linear time invariant system is given by h(n) =u(n+3)+u(n-2) – 2u(n-7) where u(n) is the unit step response. The above system is

- Causal but unstable
- Unstable and not causal
- Stable and causal
- Stable but not causal

Question No.96 4.00

Bookmark

One day, Ravi walked a distance of 75 metres towards the north. Then he turned left and walked for about 25 metres, he turned left again and walked 80 metres. Finally, he turned to the right at an angle of 45^{o}. In which direction was he moving finally?

- South-east
- North-west
- North-east
- South-west

Question No.97 4.00

Bookmark

The function of damper winding in a synchronous motor is to

- improve the pf
- suppress hunting
- develop reluctance torque
- improve the efficiency

Question No.98 4.00

Bookmark

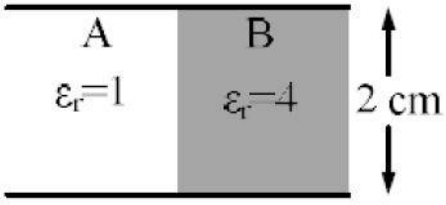
Statements: Stories are True, All true incidents are rumours.
Conclusion:
I. Stories are rumours.
II. Rumours are stories

- If either I or II follows
- If only conclusion II follows
- If neither I nor II follows
- If only conclusion I follows

Question No.99 4.00

Bookmark

A parallel plate capacitor filled with two dielectrics is shown in the figure below. If the electric field in the region A is 4 kV/cm, the electric field in the region B, in kV/cm, is



- 4
- 16
- 2
- 1

Question No.100 4.00

Bookmark

Equal area criteria in power systems is used in the context of

- Load distribution between a single machine and load drawn from infinite bus bar
- Deciding maximum loading for a given excitation
- Stability of a machine connected to infinite bus bar

- Stability of a machine connected to infinite bus bar
- Stability of power systems in which many machines are connected to infinite bus bar