



GANDHI INSTITUTE FOR TECHNOLOGY (GIFT)
(An Autonomous Institution)

Registration No :

2	2	0	1	2	9	8	5	2	7	
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Total Number of Pages: 02

BTech
BTSC-T-SC-301

3rd Semester End Semester Examination: 2023-24

Subject: EET

BRANCH(S) : All

Time: 3 Hour

Max Marks: 100

Q. Code : BT323

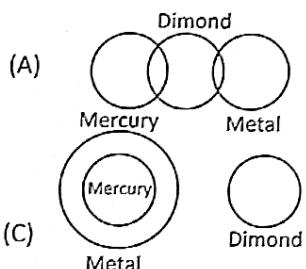
Answer Question No. 1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III
The figures in the right hand margin indicate marks.

Part - I

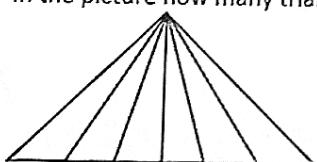
(2 x 10)

Q1. Answer the following questions:

- a) This of the following Venn diagram best represents the relation.



- b) Find the day of the date 4th January 1246? Thursday
- c) Find the unit digit of 3^{442} .
- d) Price of an article first increase by 10% then reduces by 10%. What is the net percentage change in the price of the article?
- e) Population of a city increase by 10% every year. What is the percentage change in the population after 3 years?
- f) Find the compound interest on Rs. 4000 in 3 years, rate of interest being 10% per annum.
- g) In a chess board how many square are there?
- h) 100! Ends with how many zeros?
- i) In the picture how many triangles are there?



- j) What is the unit digit of $1! + 2! + 3! + \dots + 1777!$?

Part - II

(6 x 8)

2. Answer any eight out of twelve.

- a) Find the last two digits of $25!$?
- b) A man invests Rs. 80,000 in two different banks are bank is offering 10% SI and other are offering 10% CI. The end of two year total investment received from both the banks is Rs.16400. Find the ratio of investment in both the banks.
- c) Find the difference between SI and CI in 4 years on Rs.15000, rate of interest being 8% per annum.



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- d) ✓ Population of city increase by 10% in the 1st year 20% in the second year and 30% in the 3rd year, Present population is 80000. What was the approximate population 3 years back?
- e) There is a cube of size 8cm x 8 cm x 8cm. All the 6 faces are painted Red colour and core is white. Then it is cut into 512 small cubes of size 1 x 1 x 1. How many small cubes are there having 1 side red painted?
- f) ✓ What is the unit digit of $3^{544} \times 5^{544} \times 6^{544} \times 7^{544}$?
- g) ✓ HCF of two numbers is 13 and LCM is 1690. If one of the numbers is 130 then what is the other number?
- h) ✓ TEN
- ✓ TEN
- TEN
- TEN
- ONE
- (TEN + TEN + TEN + TEN = ONE)
- If each letter stands for a different digit, then TEN stands for what.
- i) ✓ A car covered a distance of 200 km. During the journey 5 wheels are used. If every wheel covered equal distance then find the distance covered by each wheel?
- j) ✓ Which of the following are Prime number and why? And also which are not prime number and why? 493, 621, 667, 247, 131, 233.
- k) ✓ What is the unit digit of $(2343)^{523} \times (724)^{245} \times (933)^{244}$.
- l) One day a man added all the page numbers of a booklet. He got the answer as 2000. But he realized that by mistake he has skipped one page number. Find the missing page number.

Part - III

(16x 2)

Answer any two out of four.

3. In statements followed by 4 conclusions. Identify which conclusion can be derived from the given statements (draw the appropriate Venn diagram)

- A) St-1 : All doctors are clever.
St-2 : All cleavers are rich.

Conclusion:

- 1) Some clever are rich. 2) Some doctors are rich. 3) Some doctors are not rich.
4) Some rich are doctors.

- B) St-1 : Some poor are intelligent. St-2 : Some intelligent are rich.

Conclusion:

- 1) Some poor are rich. 2) Some rich are intelligent 3) Some poor may be rich
4) Some intelligent are poor

4. (A) Find the digit in the tens place and unit place last two digits of $(41)^{293}$.

(B) If 4th January 1976 was on a Thursday, then what is the day of the date 15th Aug 1947?

5. (A): HCF of two numbers is 17 and LCM is 2210. How many such pairs exist?
(B): What is the remainder when $27!$ is divided by 10^7 .

6.

(A): A mixture contains milk and water in the ratio 80% and 20% another mixture contain milk and water in the ratio 30% and 70 %. In what ratio they must be added so that the ratio between milk and water is the resulting number is 1:1?

(B): In a certain code

0 is written as β

1 is written as ψ

2 is written as $\psi\beta$

3 is written as $\psi\psi$

4 is written as $\psi\beta\beta$

What is the value of $\psi\psi\beta\beta\psi\psi$

$$(41)^1 = 41$$

$$(41)^2 = 1681$$

$$(41)^3 = 29761$$

$$(41)^4 = 6191$$

$$(41)^5 = 25197$$

$$(41)^6 = 41$$



GANDHI INSTITUTE FOR TECHNOLOGY (GIFT)
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Registration No:

2 2 0 1 2 9 8 5 2 7

Total Number of Pages: 02

BTech
BTEC-T-PE-301

3rd Semester End Semester Examination: 2023-24

Subject Name: Semiconductor Devices

BRANCH (ECE): BTech

Time: 3 Hour

Max Marks: 100

Q. Code: BT315

Answer Question No. I (Part-I) which is compulsory, any eight from Part-II and any two from Part-III

The figures in the right hand margin indicate marks.

Part - I				
01	Answer the following questions:	(16 x 2)	CO	BTL
a)	Find the Fermi Level in Si where E _F is located in the energy band of Silicon, at 300K with n=10 ¹⁸ cm ⁻³ ? And for p=10 ¹³ cm ⁻³ ?	3	2	
b)	Write the significance of one sided junction.	3	2	
c)	What is BiCMOS technology?	3	1	
d)	Prove that the thermal potential at equilibrium temperature is 25.9 meV.	3	2	
e)	A step index fiber has a core refractive index 1.5 and a cladding of refractive index 1.48. Calculate the numerical aperture of the fiber.	4	2	
f)	Assume that the mobilities of carrier at T=300 K is 925 cm ² /sec. Calculate the carrier diffusion coefficient.	3	1	
g)	A germanium transistor has the Q point corresponding to i _B =300 μA and I _C =1.3 mA. Calculate the common emitter gain.	4	5	
h)	Find out the thermal equilibrium electron concentration in GaAs at E _F =E _C .	4	2	
i)	Enumerate some applications of optical fibers.	3	1	
j)	What is poly silicon emitter?	3	2	
Part-II			CO	BTL
Answer any eight questions			(06 x 08)	
02	a) Describe the origin of band gap through diagram.	1	4	
b)	In a p-n junction diode, the current I can be expressed as $I = I_0 \left(\exp \left(\frac{eV}{2kT} \right) \right)$, K is Boltzmann constant and T is absolute temperature. Where I ₀ is called reverse saturation current. V is the voltage across the diode and is positive for forward bias and negative for reverse bias. If I ₀ =9 nano Ampere, then (a) What will be the forward current at a forward voltage of 0.6 V? (b) What will be the increase in the current if the voltage across the diode is increased to 0.8 V.	2	4	
c)	Discuss different mode of operation of transistor.	1	2	
d)	Draw Schematic of electron and hole flow paths in BJT and explain hole injection into emitter closely parallels electron injection into Base?	1	2	
e)	Draw a block diagram of fiber optic communication system and describe the function each component	2	2	
f)	What do you mean by dispersion? Derive mathematical expression for waveguide dispersion in optical fiber	1	2	
g)	Explain Equivalent Circuit Models – Ebers -Moll Model.	1	2	



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	h) The pulse broadening per unit length for an optical fiber is $12 \times 10^{-11} \text{ s/m}$. If the refractive index of the core is 1.5, calculate the refractive index of the cladding material.	2	2
	i) What is the difference between acceptance angle, critical angle and numerical aperture? A step index fiber has a core and cladding refractive index of 1.50 and 1.46 resp. what is the value of NA and acceptance angle of the fiber	1	4
	j) Photons of wavelength of $0.85 \mu\text{m}$ are incident on a p-i-n photodiode at the rate of $4 \times 10^{10} \text{ s}^{-1}$ and on an average, electrons are collected at terminals of the diode at the rate of $2 \times 10^{10} \text{ s}^{-1}$. What is the responsivity of diode at this wavelength?	2	4
	k) What is the total internal reflection? Why is it necessary to meet the condition of total internal reflection at core cladding interface ?	1	2
	l) What are the homojunctions and heterojunctions? Draw for its justification.	1	2

Part-III

Answer any Two questions from the Q-3 to Q-6 (16 x 2)

03	a) Derive an expression for the thermal equilibrium concentration of holes in the valence band using density of states function and Fermi-Dirac distribution function	3	4
	b) Consider an oxide-to-n-type silicon junction at $T = 300 \text{ K}$. The impurity doping concentration in silicon is $8 \times 10^{15} \text{ cm}^{-3}$. Calculate the maximum space charge width in silicon with carrier concentration $1.5 \times 10^{10} \text{ cm}^{-3}$	3	4
04	a) A silica optical filter with a core diameter large enough to be considered by ray theory analysis has a core refractive index of 1.6 and cladding refractive index of 1.46. Determine i) The critical angle at the core cladding interface. ii) The numerical aperture for the fiber. iii) The acceptance angle in air for the fiber.	4	2
	b) Explain attenuation (absorption, scattering and bending)	3	2
05	a) Draw schematic of electron and hole flow in BJT and explain hole injection into emitter closely parallels electron injection into base.	3	3
	b) What are the modes ? How does one distinguish between symmetric and anti-symmetric modes of a planar SI waveguide ?	3	2
06	a) Explain Depletion layer model: Field and potential in the depletion layer, depletion-layer width.	4	3
	b) Explain PN diode I-V characteristic and Charge storage.	3	4



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Total Number of Pages: 02

BTech
BTBS-T-BS-301

3rd Semester End Semester Examination: 2023-24

Subject Name: Mathematics-III

BRANCH (ECE & EEE): BTech

Time: 3 Hour

Max Marks: 100

Q. Code: BT303

Answer Question No. 1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III
The figures in the right hand margin indicate marks.

Part - I				
01	Answer the following questions:	(16 x 2)	CO	BTL
a)	Find $L\{e^{-2t} \sin 3t\}$		3	
b)	Define unit step function? What is the Laplace transform of Unit step function?		1	
c)	Find Convolution of t & π		3	
d)	What is the Fourier expansion of the $f(x) = \cos x + 2 \cos^2 2x$.		3	
e)	Test $f(x) = x x , -\pi < x < \pi$ is even or odd		2	
f)	What is the general solution of Bessel's equation		1	
g)	What is the value of $\Gamma(1/2)$?		1	
h)	State Cauchy Reimann equation		1	
i)	If the density $f(x) = \frac{x}{16}, (2 < x < 6)$, then find C such that $P(X \leq 5)$.		3	
j)	Find $P_2(x)$ Legendry function value		2	
Part-II			CO	BTL
Answer any eight questions			(06 x 08)	
02	a) Find the inverse of the $\ln \frac{s^2 + 4}{s^2 + 16}$		1	2
b)	Solve the integral equation $y(t) = e^{2t} + \int_0^t y(\tau) \sin(t-\tau) d\tau$		2	3
c)	Find the inverse of the functions $\frac{s+10}{s^2 + 4s - 2}$		1	2
d)	Find the Fourier series of the function $f(x) = \begin{cases} k, & -1 < x < 0 \\ kx, & 0 < x < 1 \end{cases}$		3	2
e)	Find Fourier cosine series of the $f(x) = e^{-ax}$, where $a \geq 0$		3	2
f)	Find Fourier transform $f(x) = e^{-ax}, x \geq 0$		3	2
g)	Solve the ode $y'' = y$ by power series method.		4	4
h)	Show that $J_2'(x) = \frac{1}{2} [J_1(x) - J_3(x)]$		4	3
i)	Evaluate $\int J_3(x) dx$		4	4



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j)	If $u = e^x \cos y$ is a real part of the analytic function, then find its imaginary part	5	3	
k)✓	Let X be normal with mean 50 and variance 9, determine c such that : (i) $P(X > c) = 1\%$, (ii) $P(X < c) = 5\%$	6	3	
l)✓	If the probability of hitting a target is 25% and 4 shots are fired independently, what is the probability that the target will hit at least once?	6	4	
Part-III Answer any Two questions from the Q-3 to Q-6		(16 x 2)	CO	BTL
03	Solve the ode $y'' + 3y' + 2y = \begin{cases} 4t, & 0 \leq t < 1 \\ 8, & t > 1 \end{cases}$	2	4	
04	Find the Fourier series of $f(x) = \begin{cases} k, & \text{if } -\frac{\pi}{2} \leq x < \frac{\pi}{2} \\ 0, & \text{if } \frac{\pi}{2} \leq x < \frac{3\pi}{2} \end{cases}$, then show that $1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \dots = \frac{\pi}{4}$.	3	3	
05	State and prove the Rodrigues's formula.	5	3	
06	Average marks in Mathematics of the ICC 10 th class result is 65 and variance is 16, then find number of the students lies between 60 to 80 and more than 90.	6	4	

** BTL: Bloom's Taxonomy Level

** CO: Course Outcomes



GANDHI INSTITUTE FOR TECHNOLOGY (GIFT)
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Registration No:

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Total Number of Pages: 03

B.Tech
BTEC-T-PC-302

3rd Semester End Semester Examination: 2023-24

Subject Name: Signal & System

BRANCH(S): B.Tech (ECE)

Time: 3 Hour

Max Marks: 100

Q. Code: XXXX

Answer Question No. 1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III

The figures in the right-hand margin indicate marks.

Part - I

Marks

01 Answer the following questions:

(02 x 10) CO BTL

- | | | | |
|----|--|---|---|
| a) | Explain the differences between an even signal and an odd signal with examples. | 1 | 1 |
| b) | Explain the time shifting of an independent variable in a discrete time signal. | 1 | 2 |
| c) | Determine if the following signal is periodic or not. If periodic, determine the fundamental period.
$x(n) = 3\cos(5n + \pi/6)$ | 2 | 1 |
| d) | Determine whether the system described by the following input-output relationship is time invariant or not.
$y(n) = ax(n) + b$ | 4 | 2 |
| e) | State Parseval's Theorem of continuous time Fourier transform. | 4 | 1 |
| f) | State the frequency shifting property of Discrete Time Fourier Transform. | 4 | 1 |
| g) | Define ROC for Z-Transform of a discrete time signal. | 5 | 2 |
| h) | Find IDFT of $X(k) = \{29, 19\}$ | 6 | 1 |
| i) | Write the Dirichlet's condition for Fourier series. | 4 | 1 |
| j) | Write the properties of auto-correlation sequences. | 3 | 2 |

Marks CO BTL

02 Part - II (Answer any eight questions)

(06 x 8)

- | | | | |
|----|---|---|---|
| a) | Determine the output $y(n)$ of a linear time invariant system with impulse response
$h(n) = \{2, 1, 3, 5, 2, 6\}$ when the input is $x(n) = \{2, 5, 2, 6\}$ | 2 | 2 |
| b) | State and explain the following discrete time system with suitable example.
i. Linear & Non-linear system
ii. Time variant & Time-Invariant system
iii. Causal & Non-Causal system | 2 | 2 |
| c) | Determine the Laplace transform of the function $f(t) = \cos^2(3t)$. | 3 | 3 |
| d) | What do you mean by energy signal and power signal? Explain with examples. | 1 | 2 |



Registration No:

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- e) Find the cross correlation of the sequences $x(n) = \{2, 3, 4, 1, -3, -8\}$,
 $y(n) = \{1, 2, 1\}$. 3 3
- f) State and prove time shifting property of Fourier Transform. 4 3
- g) If $x(n) = \{1, 5, 1, -3, 2, 1, 2, 8\}$, Find Z-Transform of the signal $x(n-5)$. 5 3
- h) Find DFT of the sequence $x(n) = \{1, 2, 2, 1\}$. 6 2
- i) Explain the symmetry property of DFT. 6 3
- j) Perform circular convolution of two sequences, $x_1(n) = \{1, 2, 1, 2\}$ and
 $x_2(n) = \{2, 3, 3, 1\}$. 6 2
- k) Determine the inverse z-transform of the function $X(z) = \log(1 + az^{-1})$ 5 3
- l) Draw the waveforms represented by following step functions 1 2
i. $f_1(t) = 2u(t-1)$ ii. $f_2(t) = -2u(t-2)$
iii. $f(t) = f_1(t) + f_2(t)$ iv. $f(t) = f_1(t) - f_2(t)$

Part - III

Marks CO BTL

Answer any Two questions from the Q-3 to Q-6 (16 x 2)

- 03 a) Given, $x(n) = \{-2, 1, 2, 3\}$, and $y(n) = \{1, 2, 4, 1\}$, Find the circular convolution using DFT and IDFT method. 6 2
- b) Classify discrete time signals with suitable examples. 1 3
- 04 a) Find the impulse response of a LTI system described by the difference equation
 $y(n) = x(n) - 3x(n-2)$. 2 2
- b) Determine whether the following system is causal, linear, dynamic, stable, time-invariant. $x(n) = \cos[nx(n) + x(n-2)]$ 2 3
- 05 a) Derive the conditions of stability in Z domain with examples. 5 3
- b) Find the inverse Z-Transform of . 5 2
- $$X(z) = \frac{1-\frac{1}{4}z^{-1}}{1-\frac{1}{4}z^{-2}}, \text{ ROC: } Z > \frac{1}{3}$$
- 06 a) The input $x(n)$ and impulse response $h(n)$ of a LTI system is given as
 $x(n) = \{-1, 1, 2, -2\}$, $h(n) = \{2, 1, 3, 6, -2, 1, 2\}$. Find the response of 6 3
the system using circular convolution method.
- b) Determine the inverse Z-transform of the following function 5 3

$$X(z) = \frac{3}{(1-Z^{-1})(1+Z^{-1})(1-0.5Z^{-1})(1-0.2Z^{-1})}$$

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Registration No.:

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B.Tech.
BT-EC-T-PC-301

Total Number of Pages: 02

3rd Semester End Semester Examination: 2023-24

Subject Name: Digital Electronics

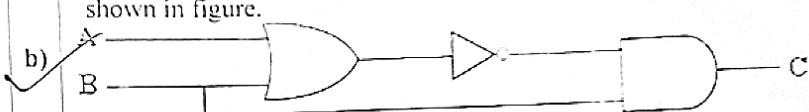
Branch(s): ECE/EEE

Time: 3 Hours

Max Marks: 100

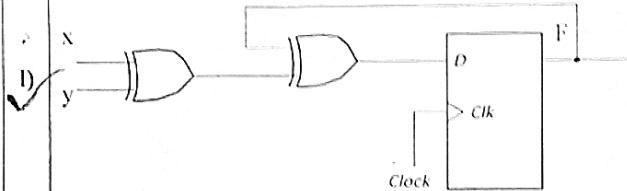
Q. Code: BT310

Answer question No. 1 (Part I) which is compulsory, any eight from Part II and any two from Part-III

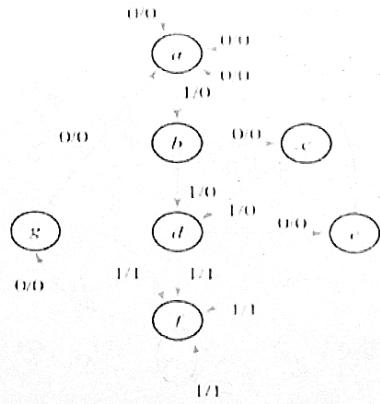
		Part - I	2 X 10 = 20	BTL	CO
01	Answer the following Questions				
a)	Prove that XOR and XNOR gates are complement of each other.		2	2	
b)	Determine the Boolean expression and truth-table for the output of the system shown in figure.		2	1	
c)	Perform the following operations by using 1's complement : (i) +52-30 (ii) 22-32		2	1	
d)	$(183)_X = (623)_8$ Determine the value of Base X?		2	2	
e)	Find the prime implicants and essential prime implicants for the expression $Y = \sum m(0,2,4,5)$		2	3	
f)	Design 4:1 Multiplexer using 2:1 multiplexer.		2	3	
g)	Draw the characteristic table, equation and state diagram of D flip-flop.		2	4	
h)	Write the difference between combinational and sequential circuit.		2	5	
i)	Distinguish between RAM and ROM.		2	6	
j)	2's complement of a certain number is $(11000101)_2$. Find its corresponding binary equivalent number.		2	1	

Part-II

02	Short answer type Questions (Answer any Eight out of Twelve)	6 X 8 = 48	BTL	CO
a)	Realize all logical gates with NAND gates.	6	1	
b)	Minimize $F(A,B,C,D) = \sum m(0,1,2,3,4,5) + d(10,11,12,13,14,15)$ using K-map.	6	3	
c)	Design a 4-bit asynchronous down counter.	6	4	
d)	Write the VHDL code for a 1x4 Demultiplexer.	6	6	
e)	Design the following Boolean functions using PLA. $Y_1(A,B,C) = \sum m(4,5,6,7)$ and $Y_2(A,B,C) = \sum m(2,3,5,7)$	6	6	
f)	Explain the operation of a 4-bit SISO shift register with necessary timing diagram.	2	5	
g)	Design a 4X 16 decoder using 3 X 8 decoder.	4	4	

	h) Implement the following function using 2 X1 MUX $F(A,B,C) = \sum m(6,5,2)$	3	4
	i) Design the circuit diagram of 2 bit magnitude comparator.	4	3
	j) Explain a 4 X 2 priority encoder.	2	4
	k) Draw the logic circuit for the expression. Simplify using algebraic method and redraw circuit. $Y = X'Y'Z + (X+Y+Z)' + X'Y'Z'W$	3	2
	Analyze the given circuit		
		3	5

Part - III

Long Answer type Questions (Answer any two out of four)		16 X 2 = 32	BTL	CO
03	a) Assume that the code word (1001100), is transmitted and (1000100), is received across the receiver. Now from the received code detect and correct the error using Even Parity.		2	1
04	a) Simplify the following Boolean expression using QM method : $F(A,B,C,D) = \sum m(0,1,3,7,8,9,11,15)$		2	3
05	a) 		4	5
	For the given state diagram i)Find the output sequence and state sequence for the input sequence 10110010. ii)Reduce the no. of states and do state assignment . iii)Draw the reduced state diagram.			
	b) Design a full adder using demultiplexer.		5	3
06	a) Design a BCD to Excess-3 code converter.		5	3

** BTL: Bloom's Taxonomy Level

** CO: Course Outcomes



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Total Number of Pages: 02

BTech
BTBS-T-HS-302

3rd Semester End Semester Examination: 2023-24

Subject Name: Engineering Economics

BRANCH (Mech, Civil, AG, EEE & ECE): BTech

Max Marks: 100

Time: 3 Hour

Q. Code: BT304

Answer Question No. 1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III
The figures in the right hand margin indicate marks.

Part - I		
	(10 x 2)	CO BTL
01 Answer the following questions:		
a) What is Nominal interest rate?	4	1
b) What is Net present value ?	4	1
c) When the price of a good is Rs 12, consumer buys 24 units when price rises to Rs 34, the consumers buy 20 unit, Calculate Price elasticity of demand?	1	1
d) What is Cost and Benefit analysis?	4	1
e) What is discount in bill of exchange?	5	1
f) Write any two basic Problems of an Economy?	1	1
g) Write any two exceptions of law of supply?	1	1
h) What do you mean by Revenue dominated cash flow diagram?	4	1
i) What is Explicit cost in production?	3	1
j) What is Comprehensive inflation?	5	1
Part-II		
	(06 x 08)	CO BTL
02 Answer any eight questions		
a) A bank gives a loan to a company to purchase an equipment worth 10,00,000 at an interest rate of 18% compounded annually .This amount should be repaid in 15 yearly instalments. Find the instalment amount that the company has to pay to the bank.	4	2
b) A company has to replace a machine after 15 years at an outlay of RS 5,00,000. It plans to deposit an equal amount at the end of every year for the next 15 years at an interest rate of 18% compounded annually. Find the equivalent amount that must be deposited at the end of every year for the next year 15 years.	4	2
c) A person is planning for his retired life. He has 10 more years of service. He would like to deposit RS 8,500 at the end of the first year and thereafter he wishes to deposit the amount with an annual decrease of RS 500 for the next 9 years with an interest rate of 15%. Find the total amount at the end of the 10th year of the above series.	4	2
d) Explain the causes of Depreciation?	4	2
e) Explain the degree of price elasticity of demand.	1	2

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i)	Briefly explain any four causes of inflation.	5	2	
ii)	What is Break-even point. Show the Breakeven point with the help of diagram?		2	
iii)	Write short notes on variable cost with diagram.	3	2	
iv)	What are the different types of loan provided by the commercial bank.	5	2	
v)	What are the difference between average cost & marginal cost.	3	2	
vi)	What are the difference between short run & long run production function.	2	2	
vii)	Write the exception of law of demand.	1	2	
Part-III Answer any Two questions from the Q-3 to Q-6 (16 x 2)				CO BTL
Q3	a) Explain any two methods of measuring price elasticity of demand. b) Explain the law of supply with limitations.	1	3	
Q4	a) What is oligopoly Market? Explain the features of Oligopoly. b) Explain the function of commercial bank.	3	3	
Q5	a) Consider the following data of a company for the year 2020 Sales = 1,20,000 Fixed cost = 25,000 Variable cost = 45,000 find (i) Contribution (ii) Profit (iii) P/V ratio (iv) BEP (v) MS	4	3	
	b) A company purchased an equipment whose first cost is 1,00,000 with an estimated life of 8 years. The estimate salvage value of the equipment at the end of its life time is Rs 20,000. Find the depreciation and book for the various years by using sum of year digits method of depreciation.	4	3	
Q6	a) LIC accepts Rs 10,000 at the end of every year for 20 years and pays the investor Rs 8,00,000 at the end of 20th year. Bajaj Allianz accepts RS 10,000 at the end of every year for 20 years and pays the investor 15,00,000 at the end of 25th year. Which is the best alternatives by present worth method with $i=12\%$.	4	3	
	b) A company purchased an equipment whose first cost is 1,00,000 with an estimated life of 8 years. The estimate salvage value of the equipment at the end of its life time is Rs 20,000. Determine the depreciation charge and book value by using declining balance method of depreciation by assuming $K=0.2$	4	3	