FIBRS. Sen-II Regular & ATHA Exemination
April - 2018
Suber Business Environment.

Q.P. Code: 34130

Duration: 2 1/2 hours

Max marks: 75

7

NOTE:

i. All questions are compulsory.

ii. Figures to the right indicate full marks.

Draw neat and clean diagram wherever necessary.

	Inherited business	a. Aid-to-trade
	Banking	b.Internal environment
	Co-operative organization	 External micro environment
	Vision, mission	d.1969
	Distributors	e.Capitalism
	Demographics	f.Joint Hindu Family
	MRTP Act	g.External macro environment
	Lesser government regulation	h.Rendering service
-	Private Ownership	i. Liberalisation
)	Dominant One party system	j. Cuba

- b. State whether the following statements are true or false (Any 7)
- 1) Political uncertainty & economic prosperity go together
- 2) Corporate social responsibility makes social groups satisfied
- 3) GATT was replaced by WTO
- MNC's create brain drain in the host countries
- CSR propagates unfair trade practices
- Honesty & Integrity have an impact of business
- Social audit determines social performance
- 8) Cultural factors have no impact on business
- According to Michael Porter competition in an industry is influenced by two factors.
- 10) The banking sector has emerged as a sunrise sector in the Indian economy.

Page 1 of 2

6B97F38ED2EB83D333FC758D27269E63

1

_

Q.P. Code: 34130

Q2	a	Explain in brief various components of business environment.	16
		OR	15
Q2	a	Discuss in detail the nature of business.	
	b.	Write a detailed	8
		Write a detailed note on Socialism.	7
Q3	a	DC	
V-	b.	Discuss in detail the political institutions in India	8
	1,1,	"Joint sector helps in the growth of economy". Explain.	7
		OR	
Q3	а	What is social audit? Explain its importance for business.	920
	b.	What are the basic factors influencing corporate governance.	8
		g corporate governance.	7
Q4	21	Explain the impact of technology on business.	
	b.	Discuss competitive strategies that 6	8
		Discuss competitive strategies that firms usually apply to stay in business.	7
Q4	а	OR Evaluate Direct and Indian P	
4.	b.	Evaluate Direct and Indirect Exporting as a tool to enter foreign market.	0
	U.	Describe briefly the objectives and functions of WTO.	8
0.5			7
Q5	а	Discuss the various dangers of MNCs to developing country.	
	b.	Explain the functions of FDI in developing countries.	8
			7
05		OR	
Q5		Write short notes on any 3:	
	a. b.	Types of Industry	15
	e.	Joint Hindu Family Business	
	d.	Socio Cultural Environment CSR	
	e.	Investment opportunity in service Industry	

Page 2 of 2

6B97F38ED2EB83D333FC758D27269E63

FYBMS Sem-II Regular & ATVI

FYBMS Sem-II Regular & ATVI

GRANNATIVE APPILLEDE

O. P. Code: 33878

Sub:-foundative Comise Marks: 75

Time: 2 1/2 hours

Note: 1) All Questions are compulsory.

	2) Figure to the right indicates full marks.	1000
		(8)
_A Choo	ise the correct alternatives (any eight)	
(5)	means integrating the national economy with the world economy. [Globalisation, Privatisation, Socialisation]	
(ii)	farming is undertaken by large firms either by buying the land	
	ortaking land on lease basis.	100
	(Corporate, Contract, Mutual)	
(iii)	Human Rights haveapplication.	
(111)	(Social, Political, Universal)	
(iv)	The General Assembly adopted the UDHR on 1948, at Paris,	
(-)	(10th December, 11th December, 12th December)	
(v)	degrades the soil and makes the cultivation of the crops impossible	
	(Deforestation, Desertification, soil erosion)	
	is the study of relationship between organisms and their environme	ent.
(vi)	is the study of relationship occurred organization	
	(Biology, Sociology, Ecology)	
	refer to moral and social norms that are essential for the well-being	of an
(vii	individual, group or society.	
	(Values, Ethics, Prejudices)	
(vii	are generalisations or assumptions about the characteristics of t	raits
(12	ofpeople belonging to a group.	
	(Stereotypes, Prototypes, Sociotypes)	
		d
6	Theneeds lie at the highest level of the hierarchy of Maslow's Nee	
	Hierarchy Theory.	
	(Physiological, Social, Self-actualisation)	
	don't believe in taking risk.	
	(X) don't beneve in taking risk. (Concealers, Attackers, Addressors)	
A STATE		(7)
1.	B State whether the statement is True or False	(7)
3.8	This impact of globalisation	
1		
	(ii) Immigration means moving into a new country.	
	Days 1 of A	

Page 1 of 4

- The UDHR consists of 28 articles. (iii)
- Writ can be issued only by Supreme Court. (iv)
- Abiotic components are non-living compound and physical elements in the (v) environment.

dings with the Long Long Fi

- Atmosphere regulates the global temperature. (vi)
- Environmental factors are only factor causing stress. (vii)
- Eustress are also known as negative stress. (viii)
 - Maslow's theory is on Human Motivation. (ix)
 - Meditation is an effective method of relieving stress. (x)
- 2. Discuss the concept of privatisation. Highlight the advantages and disadvantages of privatisation.

OR

What is migration? Discuss the causes and consequences of migration.

3. Discuss the civil, political and economic rights under UDHR.

(15)

Explain the concept of human rights. What are the important landmarks in the development of modern human rights?

4. What is Sustainable Development? Discuss the basic components of Sustainable Development. (15)

OR

What are the causes of aggression and violence? Discuss measures for resolving aggression and violence in society.

What is stress? Discuss various strategies to reduce stress.

(15)

OR.

Write short notes on (any three):

- (a) Advantages of liberalisation
- (b) Right against exploitation
- (c) Air pollution
- (d) Family as agent of socialisation
- (e) Importance of values in society

Page 2 of 4

Enamination March 2018 arcode, 21701 (5) Suber Principals of management [Time: 2 thours] [Marks: 75] [Marks: 75]

Please check whether you have got the right question paper,

1. All questions are compulsory subject to internal choice.

2. All questions carry equal marks.

Management is a	choosing the correct altern	
		(c) pure
skills refer	s to the ability of a manage	r to interact with hi
The state of the s		
(a) technical	(b) conceptual	C) Hall
is known a	as the father of scientific man	(a) Dater Drucker
(a) F W Taylor	(b) Henry Fayol	(c) Peter Diucker
Programmed decisions	(b) Henry Payol s are on problems. (b) repetitive bes the precise time when each	Les Sweet
(a) rare	(b) repetitive	(c) need
A prescri	bes the precise time when each	of the series of account
should take place.	VERTIBLE PROVIN	Table Manager
(a) project	(b) budget	(c) sonetime
organizatio	(b) budget on is the oldest and the simple	st form of organizatio
structure.		(c) matrix
(a) line	(b) functional	-ordender
it organia	ration the employees have to	
authority.	(b) dual related to span of control. (b) managerial grid one of the steps in P	(c) triple
(a) single	(b) dual	7
8. theory is r	elated to span of condon	(c) game
(a) Graicunas	(b) manageriai griu	rocess.
9. Corrective action is a	one of the steps in	(c) direction
(a) planning	1 1 motting pres	gure on the workers.
10. Teader ge	one of the steps in P (b) control ts things done by putting pres (b) democratic	(c) neurocratic
(b) paternalistic		
F F F F F F F F F F F F F F F F F F F	are	True or False.
Q1(B) State whether t	he following statements are	(Any 8) (8)
经过工作区域是是公共	SON SKULL Hope	
1. Management is wha	t require expert knowledge and	skills.
2. Professionals do Ho	of managemen	t.
3. Planning is the seco	beliefs and philosophy of the medical aspecific action.	anagement.
4. Mission points out	demand a specific action.	
The last ore mond and	CICIII CLIPA	
6. Formal organization	n spreads rumours. ans the number of subordinat	es that can be manag
7. Span of control me		t to make salara
by the managers.	gue that the staff managers	do not supply releva
8. Line managers and information quickly	V.	
o Gittational leader	combines traits of all types of less people to achieve their object	eaders.
Continue and the second	- biggs their object	IVCA.

Page 1 of 2

Q.P.Code: 31761

Q2(A) Is management an art? Illustrate your answer.	189
Q2(B) Explain any seven principles of management given by He	Bry Favo
tally seven principles of management	(7)
OR	10)
Q2(C) Explain the managerial grid theory.	(8)
Q2(D) What are the levels of management? Explain the functions of	each leve
c () seems at a total of management. Implant the two-	1
Q3(A) Outline the main advantages of planning.	(7)
Q3(B) Briefly explain the concept of MBO,	(8)
OR	(7)
Q3(C) Explain the importance of decision making,	16
Q3(D) Describe any four techniques of decision making,	(8)
de la constant manig.	(7)
	^ z
Q4(A) Discuss the merits and demerits of informal organisation.	101
Q4(B) Bring out the importance of departmentation.	(8)
	J 6 (7)
Q4(C) Distinguish between centralisation and december 1	- m
Q4(D) Explain the principles of effective delegation of authority.	(8)
2.4 2.7 cm cm (2.1 cm / 2.2 cm	(7)
Q5(A) Discuss the need for green management.	(40)
Q5(B) What are the qualities of a good leader.	(8)
	(7)
Q5. Write Short Notes on: (Any 3)	1 4 65
(a) POSDCORB	(15)
(b) Factors affecting span of control	
(c) Co-ordination	
(d) Corporate Social Responsibility	
(e) Process of direction	
一种大型型型工作的	
[12] [12] [12] [12] [13] [13] [13] [13] [13] [13] [13] [13	

The second secon

FYBMS Sem-II Regular of ATRIT Brownish Brown of April - 2018 Commiscrathe Sub e - Business Communication Q. P. Code: 12169

Duration: 21/2 hours Total Marks: 75

	N. B. 1) All question	ons are	compulsory.	100
Q. I. A. Fill i	n the blanks with suitable option	ons. (A	ny Eight):	(08)
1)	A/An provides writt	en intin	nation about the date, time a	nd venue of
	a business meeting.			
		8		
	(Notice / Resolution / Agenda)			
2)	A Structured Interview is			
	(pre - planned / unplanned / p	lanned	on the spot)	
3)	are based on the fir	dings o	f a Business Report.	
	(Recommendations / Terms o	f Refere	nce / Summary)	
4)	The primary objective of a an		Interview is to select the	best
	candidate for the job. (Selecti	on / Exi	t / Appraisal)	run in
5)	Conferences provide a valuat			-
3)		Y = 1		
	(Seminars/Committees/Symp			
6)	Business meetings have a/an	Same	agenda.	
	(indefinite / dynamic / fixed)			
7)	A Group Interview is similar	to a	(Group Discussion /	Panel
	Interview / Structured Interv	iew)		
8)	Suggestion Schemes are an	example	of Communicatio	n.
	(Upward / Downward / Zigz	ag)		
9)	Catalogue, Price-list and Pro	duct Li	terature are sent by a seller in	response to a
	Letter of (Order			
10	A conference should be			uality based)
1000				(07)
Q. 1. B.	Match the following (Any Seven		Vote of Thanks	(0.)
2 2) Motion	a) b)	Review of Performance	
	Conference	c)	Open House	
	Promote Sales Last Item in the Agenda	d)	Outgoing Employee	
the second second		e)	Give Latest Developments	
	5) Exit Interview 6) Bulletins	f)	Proposal	
And the second s		g)	Exchange of Views	
	7) Appraisal Interview8) Skype	h)	Discounts	
Service Services	9) Group Communication	i)	Group Discussion	
	10) External PR	j)	Video Chat	
S. W. S. S. S.				
A STATE OF THE STA				

Page 1 of 3

Q. 2	A.	How should a candidate prepare himself for a Job Interview?	(07)
Q. 2	В.	List and explain the factors that must be considered to organize	
	В.	a successful conference.	(08)
		OR	
			300
	C.	What is a Grievance Interview? Why should it be conducted?	(07)
	D.	Define Public Relations. List and explain any five measures to	
	υ.	promote the external Public Polations of an organization	(08)
		promote the external Public Relations of an organization.	(00)
Q. 3		And a little day	1 - 1 - 1 - 1
Q. 3	A.	An educational institution requires one hundred and fifty desks	Ť.
		for its classrooms. Draft a Letter of Inquiry addressed to Famous	1 - 1
		Mart asking for a price-list and catalogue. Use the Complete Blo	-
	В.	layout.	(07)
	В.	Mr. Gupta bought two dozen fruit drink cans from Super Bazar.	
		On checking the cans at home Mr. Gupta realized that the cans	3 = 1
		sold to him were 20 days past their expiry date. Draft a Letter of	3
		Complaint on his behalf. Use the Modified Block layout,	(08)
	0		× .
	C.	Draft an Investigative Report with recommendations about the	
		unhygienic conditions in the canteen of Wonder Works Pvt. Ltd,	
	D.	Chembur, Mumbar	(10)
	D.	Draft the Notice and Agenda for the Annual General Meeting of	()
		Phoenix Computers, Worli, Mumbai.	(05)
0.4			4.0
Q. 4	A.	Draft a Sales Letter to promote a 'Vedic Maths and Abacus Cente)
	n 6	Use the Semi Block layout.	(05)
	В.	Amrit Lal had paid his telephone bill in time, yet his telephone line was disconnected on charges of non-payment.	(07)
	500	was disconnected on charges of non-payment. This has happened	e
	6.00	for the third consecutive month. Draft a letter on his behalf	
33.	-07%	addressed to the Consumer Redressal Forum seeking compensation for the harassment and immediate restoration of the	
400	6.23	for the harassment and immediate restoration of the connection. Use the Complete Block layout	n
	3.700	Use the Complete Block layout.	
	7.5%	OR	(08)
7.7		Draft an RTI Letter seeking information regarding	
		Draft an RTI Letter seeking information regarding your application driving license that has not been processed in spite of having passe Driving Test and having submitted the required documents.	for a
	1000	Driving Test and having submitted the required documents three	d the
1000		months ago.	
1, 20 %	3000		(07)
55 P	0 6 3		

Q. P. Code: 12169

D. Summarize the following passage:

(08)

The educational philosophy of Swami Vivekananda is a harmonious synthesis between the ancient Indian ideals and modern Western beliefs.

He not only stressed upon the physical, mental, moral, spiritual and vocational development of the child, but also advocated women's education, as well as education of the masses. The essential characteristics of the educational philosophy of Swami Vivekananda are idealism, naturalism and pragmatism.

From a naturalist view point, he emphasized that real education is possible only through nature and natural propensities. From an idealist view point, he insisted that the aim of education was to develop the child with moral and spiritual qualities. From a pragmatist view point, he emphasized the need for Western education of technology, commerce, industry and science to achieve material prosperity. In short, first he emphasized spiritual development, then natural propensity, after that safety of life and then solving the problems of food and clothing of the masses.

Swami Vivekananda considered women to be the incarnation of power. He rightly pointed out that unless Indian women secure a respectable place in this country the nation can never move forward. The important features of his scheme for female education are, "Make women strong, fearless and conscious of their chastity and dignity". He insisted that men and women are equally competent not only in the academic matters, but also in other spheres of life. Swami Vivekananda being a keen observer could distinguish the difference in perception about the status of women in the West and in India. "The ideal woman in India is a mother, a mother first, and a mother last" he declared.

Q. V. Write short notes: (Any Three)

(15)

- 1) Advantages of Conferences
- 2) Role of a Chairperson in a Business Meeting
- 3) Appraisal Interview
- 4) Videoconferencing
- 5) Functions of the Public Relations Department of an Organization

0

Page 3 of 3

BA2FAD5BCD33A799A83AA3019E422E50

KYBUR Bem-II pegun + AARI Brandman Luber Principal of merebeting. April 2018

Q.P. Code: 08061

[Time: $2\frac{1}{2}$ Hours]

[Marks:75]

Please check whether you have got the right question paper.

N.B: 1. All questions are compulsory.

- A State TRUE or FALSE Answer (any 08)

 In personal selling, seller and buyer come in direct contact with one another

 Product research relates to manufacturing and marketing of the product

 Zero level channel of distribution has numerous middlemen.
- 4 Firms have better control on micro environment than macro.
- 5 Geographic segmentation includes variables such as region, cities and states.
- 6 Legislations are a part of Political environment.
- 7 Government Policy is not a controllable marketing factor
- 8 Decline stage is the first stage in Product life Cycle
- 9 Skimming Pricing involves selling at low price initially
- 10 Brand helps to identify one product from the other.

atch the following - Answer (any 07)	i) FaceBook
) Social Factors	W a List-right Easters
o) Irregular Demand	ii) Psychological Factors
o) Hiegura service	iii) Production Concept
c) PEST	
d) Logo	iv) Promotion
	v) Customer Satisfaction
e) Focuses on volume of Production	vi) Environmental Scanning
f) CRM	VI) Environmental scanning
Marie Company of the	vii) Place Mix
g) Attitude	viii) Reference Groups
h) Coupons & Rebate	VIII) Reference droups
	ix) Brand
i) Social Media Marketing	x) Seasonal Demand
j) Distribution Channel	x) Seasonal Demand

Q. 2 a What do you mean by marketing? Explain the features of marketing
b Explain the 4 Cs of marketing
OR
P Discuss how marketing has evolved from exchange process to holistic marketing.
q Highlight the difference between marketing and selling.

1

823882DC6969BD73E8DDAA7F6F2620F4

1

Q.P. Code: 08061

		t and the first transfer of the state of the	8
Q. 3	a.	Discuss the elements of macro environment of business.	7
	b	Explain the factors affecting consumer behavior. OR	
		OR .	
	р	What is Marketing Information System (MIS)? Explain its importance	8
	q	What is consumer research? Explain the need for consumer research	7
Q. 4	a	Discuss the levels of a product	8
	b	Explain the role and importance of packaging in marketing products OR	7
	p	What is a distribution channel? Suggest, with reasons, suitable distribution channel for the following products: i. Cheese ii. Laptop iii. School bags	8
	q	Discuss the objectives of pricing	7
Q. 5	a	What is e-marketing? Explain the limitations of e-marketing	8
	b	Discuss the need and significance of Relationship Marketing OR	7
	p	Write Short Notes on (any 3) i. Segmentation ii. Advantages of Internet Marketing iii. Social Marketing iv. Targeting v. Marketing using Social Media	15

7 1817 Bon II Pegum - ATES Exertingen

FYBMS Sem-I Regular & ATRI Gaminestin,
April - 2018

April - 2018

Sub e- Industrial Low. Q. P. Code: 31025 Note: All questions are compulsory Q.1. a. Fill in the blanks: (Any 8) 1. The central government may constitute one or more ______ Tribunal for the adjudication of industrial dispute involving questions of national importance. 2. Lay off compensation is to be paid @_____of the average wages. 3. Every registered Trade Union has a _____succession. 4. Artificial humidification is a _____ provision under the factories act. 5. A workman under workmen's compensation act is not liable for compensation, if at the time of accident he was under influence of Benefit is paid to the eldest surviving member of the family of insured person under 6. the ESI Act. 7. The employees Provident Fund money is invested in _____ 8. Fine should not be imposed on any employee who is under the age of ____years. 9. In case of death of an employee his _____ is entitled to get the bonus due to the employee. 10. Employee in a seasonal establishment will get gratuity at the @ of ____days wages for each season. (7)Q.1.b. True or False: (Any 7) 1. Extraction of salt from sea water is a factory. 2. A police officer is a workman under Industrial disputes act. 3. Closure means temporary closing down of the place of employment. 4. Role of a trade union is to secure fair wages to for workers. 5. If there are 100 numbers of employees, then employer has to provide a canteen. 6. Partial disablement means where disablement is of a permanent nature. 7. Marriage is a precondition for maternity benefit. 8. The provident Fund contribution as a % of wages is 12% of salary. 9. Wages does not include any bonus payable under the terms of employment. 10. Spitting outside spittoons is offence punishable with fine up to rs.5/-. Q.2. a. State the difference between Individual Dispute and Industrial Dispute under IDA. (7)b. What are the purposes for which general fund of a registered trade union can be spent? (8)a. Bring out the difference between strike and lockout. . (8) b. What is the legal status and role of trade union? (7)Q3.a. Write in brief on rules of medical examination of Workmen under workmen's compensation (8)b. Explain the provisions of health under Factories act. (7)a Distinguish between Partial and total Disablement . (8)b. Enumerate the term Worker and Manufacturing process under Factories act. (7)Page 1 of 2 9FE72D2B8ADCF4B906821709A2973C57

Q4.a.Summarise the different types of Benefit under the ESI Act. b. Explain in detail the provisions relating to employees pension scheme. OR a. Explain the constitution of Medical Benefit Council under ESI Act. (8) b. What are the obligations of the employer under the ESI Act? Q5.a Define Wages. Explain the rules of payment of wages under payment of wages ACT. (8) b. What do you mean by 'Allocable surplus' and 'Available Surplus' under payment of Bonus Act OR Q.5.Short Notes (Any 3) (15)a AWARD

- b. Calculation of gratuity and payment of gratuity
- c. Employees deposit linked insurance scheme
- d. Employees Insurance Court.
- e. Doctrine of assumed Risk,

Houldones PIBETT Sen-II Regulard AS APRIL-2018 Mathematics. [Time: 21 Hours] [Marks: 75] Please check whether you have got the right question paper. N.B: 1. All questions are compulsory 2. In Q.1 attempt both the sub-parts A&B. 3. Figures to the right indicate marks. 4. Use of non-programmable calculator is allowed. Attempt both subparts A& B: (A) Write the appropriate answer (Any Eight): 08 1. Given, Principal = Rs.1500, Number of years=3, Interest=Rs.225, then the rate of Simple Interest will be: i. 3 %pa 4 %pa ii. 5 %pa iv. 6 %pa 2. The point of no profit no loss is known as: Equator Break Even Point ii. Null point iii. Variable point iv. 3. The number of ways in which 3 boys and 4 girls can be arranged in a row so that all the three boys are together are: 31 x 4! 5! x 3! ii. 7! iii. None of the above iv. 4. A square matrix whose determinants is zero is called: Singular i. Non singular 11. Scalar iii. Identity 5. For matrix multiplication, the number of Columns of first matrix should be number of rows of Second Matrix: Less than Equal to ii.c More than iii. Square of

> Page 1 of 4 6312D56E778E5E465DA920C90BF907C1

Q.P. Code :31979

6. The determinant value, of a 2x2 matrix, and its	transpose	are
--	-----------	-----

- i. the same
- ii. never the same
- iii. 2 Dimensional
- iv. 3 Dimensional

7. The derivative of $x^2 \log x$

- i. $x^2 \log x$
- ii. 1+2 logx
- iii. 2logx
- iv. None of the above

8. The extra revenue that an additional unit of a product will earn is called:

- i. Conditional Revenue
- ii. Marginal Revenue
- iii. Elastic Revenue
- iv. Average Revenue

9. The pre-condition in the method of finite differences is that values of the arguments are :

- i. equidistant
- ii. non equidistant
- iii. logarithmic
- iv. exponential

10. While finding the difference of two successive entries in the forward difference table, the upper number is always _____ the lowest number:

- i. added to
- ii. subtracted from
- iii. divided from
- iv. multiplied to

(B) Match the columns (Answer Any Seven):

5 80	column A	198	column B	
	Sinking Fund	a)	Demand>Supply	
ii.	Scalar Matrix	b)	When a matrix is equal to its transpose	
iii	Stationary Point	c)	maxima	
iv	Equilibrium Point	d)	Total Revenue/Total Quantity	
٧	Identity Matrix	e)	Δ	
vi	f'(x)<0 at critical point	f)	Point at which dy/dx=0	
vii	Forward difference operator	g)	Neither maxima nor minima	
viii	Average Revenue	h)	Type of annuity that can be used to replace a depreciating asset	
ix	Point of Inflection	i)	A. A.I	
X	Symmetric Matrix		Demand = Supply	
		k)	When a matrix is equal to its inverse	
	TO SALES	1)	[3 0]	

- O.2. A. Mr. Value invested some money at a certain rate of simple interest per annum. The total amounts. received by him were Rs 7654.4 in 2 years and Rs 7948.8 in 4 years respectively. Find the principal and the rate of simple interest.

08

- B. A manufacturer has invested Rs.30,000 as fixed cost and a variable cost of Rs.20 per suit for production of toys. If each toy can be sold at Rs.40, find the Cost function, Revenue Function and Profit Function. Also find the number of toys to be produced to achieve the Break Event point.
- OR Q.2 P Find the amount at the end of one year of an annuity of Rs. 500 payable quarterly, rate of interest 668 heing 16% p.a.
 - Q. The staff of a department consists of a manager, an officer and 10 clerics. A committee of 4 to be selected from this department. Find the number of ways in which this can be done so as to always include:
 - the Manager 1
 - the Manager but not the officer.
- A (i) Find matrix X if: $Y = \begin{bmatrix} 3 & 2 \\ 0 & 4 \end{bmatrix} \text{ and } 2X+Y = \begin{bmatrix} 1 & 0 \\ -3 & 2 \end{bmatrix}$ (ii) Find matrices X and Y if: $X+Y = \begin{bmatrix} 7 & 10 \\ 2 & 5 \end{bmatrix} \text{ and } X-Y = \begin{bmatrix} 3 & 0 \\ 0 & 3 \end{bmatrix}$ B Solve the following equations using Cramer's Rule: Q3 A

$$x + y + z - 7 = 0$$

 $x + 2y + 3z - 16 = 0$
 $x + 3y + 4z - 22 = 0$

OR

- Find by Adjoint method the inverse of $A = \begin{bmatrix} 1 & 2 & 3 \end{bmatrix}$
 - Q For the following 2 industry input-output model, find Technology matrix. Also calculate the level 07 of output, if final demand of each product increases by 60 units. Further find the labor requirement for this output.

Industry	Consun	aption of Industry	Final	Total
Branchis Y	1	2	Demand	Acres -
	120	130	150	400
1	120	180	200	500
2 Labour	80	200		1

Page 3 of 4 6312D56E778E5E465DA929C90BP907C1

Q.P. Code :31979

07

08

07

15

Q.4 A A company produces x items at a total cost of Rs. (70 + 2x). The demand function is P=100-x. where P is the price and x is the demand. Find the value of x for which:

Total Revenue is increasing

Total Profit is increasing.

B Applying Newton's Backward Interpolation Formula, obtain a polynomial function to fit the following data:

45 40 30 35 X 20 24 30 38 y=f(x)

OR

P Using derivatives, divide 30 into two parts so that their product is maximum.

Q. A farmer noted the following figure for the quantity of fertilizer (in kg) used on his plot of land and the yield (in kg) of wheat from the plot,

Fertilizer (kg) 32 24 Yield (kg)

Applying Newton's Forward Interpolation Formula, determine the optimum amount of fertilizer for the plot and the maximum yield expected.

- A) A manufacturer can sell x items per month at a price p=200-2x. The cost of production is Q.5 given by C=2x + 1200. Find the Average Profit and the marginal profit when x=10.
 - B) Ms. Agarwal has taken a Loan of Rs.11,000 at 10% p.a. to buy gold ornaments. If the amount is to be returned in 6 monthly installments, find the EMI she has to pay. Also prepare the amortization table for the first 2 months.

C) Attempt any 3:

1. Explain the difference between Permutations and Combinations.

2. With an example, explain Upper Triangular Matrix, Lower Triangular Matrix and Skew Symmetric Matrix.

3. State and explain any two properties of determinants.

4. Write a short note on Price Blasticity of Demand.

5. Explain the importance of Business Mathematics in Management.

Q.P. Code :31979

07

08

07

15

Q.4 A A company produces x items at a total cost of Rs. (70 + 2x). The demand function is P=100-x. where P is the price and x is the demand. Find the value of x for which:

Total Revenue is increasing

Total Profit is increasing.

B Applying Newton's Backward Interpolation Formula, obtain a polynomial function to fit the following data:

45 40 30 35 X 20 24 30 38 y=f(x)

OR

P Using derivatives, divide 30 into two parts so that their product is maximum.

Q. A farmer noted the following figure for the quantity of fertilizer (in kg) used on his plot of land and the yield (in kg) of wheat from the plot,

Fertilizer (kg) 32 24 Yield (kg)

Applying Newton's Forward Interpolation Formula, determine the optimum amount of fertilizer for the plot and the maximum yield expected.

- A) A manufacturer can sell x items per month at a price p=200-2x. The cost of production is Q.5 given by C=2x + 1200. Find the Average Profit and the marginal profit when x=10.
 - B) Ms. Agarwal has taken a Loan of Rs.11,000 at 10% p.a. to buy gold ornaments. If the amount is to be returned in 6 monthly installments, find the EMI she has to pay. Also prepare the amortization table for the first 2 months.

C) Attempt any 3:

1. Explain the difference between Permutations and Combinations.

- 2. With an example, explain Upper Triangular Matrix, Lower Triangular Matrix and Skew Symmetric Matrix.
- 3. State and explain any two properties of determinants.

4. Write a short note on Price Blasticity of Demand.

5. Explain the importance of Business Mathematics in Management.