

SOMAIYA

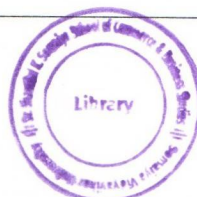
VIDYAVIHAR UNIVERSITY

Dr. Shantilal K. Somaiya School of Commerce and Business Studies

QUESTION PAPERS

BRANCH: Bachelor of Business Management	SEM: I
	JAN-2023

Sr. No.	Subject	Available
1.	131U06N101 – Business Demography & Environmental Studies (A)	
2.	131U06N101 – Business Demography & Environmental Studies (B)	
3.	131U06C101 – Business Environment & Management (A)	
4.	131U06C101 – Business Environment & Management (B)	
5.	131U06C101 – Business Environment & Management (C)	
6.	131U06K101 – Business Communication Skills (A)	
7.	131U06K101 – Business Communication Skills (B)	
8.	131U06C103 – Microeconomics/Business Economics	
9.	131U06C104 – Business Statistics (A)	
10.	131U06C104 – Business Statistics (B)	
11.		
12.		
13.		
14.		
15.		



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Semester (August 2022 to December 2022)		
Examination: End Semester Examination January 2023 (UG Programmes)		
Programme code: 06 Programme: BBM	Class: FYBBM	Semester: I
Name of the Constituent College: S K Somaiya College	Name of the Department : Business Studies	
Course Code: 131U06N101	Name of the Course: Business demography & Environmental studies	
Duration : 2 Hrs.	Maximum Marks : 60	
Instructions: 1)Draw neat diagrams 2)Assume suitable data if necessary 3)		

Question No.		Max. Marks
Q.1(A)	Explain the meaning of term Demographics. Explain demographics segmentation. Give importance of demographics in brief.	15
	Or	
Q.1 (B)	Give a short note on following- a) Eco tourism b) Green marketing c) Organic marketing	15
Q.2 (A)	What is Natality? Give its types and state reasons for declining Natality rate in INDIA.	15
	Or	
Q.2 (B)	Define – Environment. Explain different types of Environments. Illustrate the Environmental factors affecting business.	15
Q.3 (A)	Explain – BPL. State its causes and give an account on poverty alleviation five years plan in INDIA.	15
	Or	
Q.3 (B)	Read the given Case Study carefully and answer the following questions. Foaming Lake Bellandur, the largest lake in Bengaluru, caught fire on Thursday (February 16) evening after a garbage mound around it was set ablaze. Dry hyacinth and weed around the lake also caught fire, further intensifying the situation. The possibility of toxic chemicals, which are dumped into the lake, causing the fire to flare up cannot be ruled out. The environment ministry has already ordered a probe into the incident. In May 2015, the foam covering the water surface caught fire and burned for hours. While illegal dumping of garbage on the banks of the lake is a persistent issue, the locals allege that weeds and dry grass are also regularly burnt in the area without supervision by garbage collectors. The extent of the fire was such that it almost engulfed the entire lake. The smoke not only reached a nearby flyover, but also caused a scare among residents and motorists on the busy Sarjapur main road.	15

	<p>The local authorities are in state of denial and blamed it on the dry grass in the vicinity.</p> <p>The locals have time and again approached the civic authority to stop the discharge of chemicals and other toxic substances from factories and households into the lake.</p> <p>Pollution regularly causes the Bellandur Lake to froth so heavily that the foam is seen on nearby roads. Often, flames are seen leaping off the water because of the phosphorus and oil on the surface.</p> <p>The government has accepted all the recommendations, including the short-term measures like de-weeding, and improving aeration by installing a fountain. The long-term measures, recommended by committee, included installation of sewage treatment plants (STPs) of 90 million litres per day. a Bellandur resident and an IT professional, had started an online petition in 2015 urging government to take immediate action. More than 46,000 people have signed it so far to prevent what can be a carcinogenic disaster.</p> <p>Questions:</p> <p>Q.1 Give causes of Foaming Lake incident?</p> <p>Q.2 Illustrate environmental impact of incident?</p> <p>Q.3 Explain the aftermath of incident?</p>	
<p>Q.4 (A)</p>	<p>Choose the correct alternative out of following.</p> <p>1. Number of deaths per unit area and per unit time is known as _____. A) Natality B) Mortality C) Sex ratio D) Age pyramid 01</p> <p>2. _____ labour is primary occupation of INDIA. A) Industrial B) Political C) Agricultural D) Medical 01</p> <p>3. _____ Population is the non- working population of a country. A) Independent B) Dependent C) Handicapped D) Student 01</p> <p>4. _____ is used to describe the number of females per 1000 males. A) Sex ratio B) Age C) Literacy D) Population 01</p> <p>5. _____ controls & solve nation wise environment associated problems. A) CPCB B) MPCB C) APCB D) TUCB 01</p> <p>6. _____ credit is financial instrument that allows the holder or energy company to emit one ton of CO₂. A) Money B) Gold C) Business D) Carbon 01</p> <p>7. United Nations Framework Convention on Climate Change is known as _____. A) ANFCCC B) GNFTTT C) NFCFF D) UNFCC 01</p> <p>8. Which of the following is not biodegradable? A) Vegetable B) Fruits C) Fish D) Aluminium foil 01</p>	



Q.4 (B)	State whether the following statements are True or False . 1) Environment is one subject which is global in nature. 2) Kerala has highest literacy rate in INDIA. 3) In the region of tropical forests, the scope for the development of economic activities is very limited. 4) Plant eating animals are known as herbivores. 5) Demographics analysis is the collection and study of data regarding general characteristics of specific populations. 6) The concept of sustainable development is a new concept for Indians. 7) There has been tenfold increase in urban population over 1901-1991	07 01 01 01 01 01 01 01
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Semester (August 2022 to December 2022)		
Examination: End Semester Examination January 2023 (UG Programmes)		
Programme code:06 Programme: BBM	Class: FYBBM	Semester: I
Name of the Constituent College: S K Somaiya College	Name of the Department : Business Studies	
Course Code: 131U06N101	Name of the Course: Business Demography & Environmental studies.	
Duration : 2 Hrs.	Maximum Marks : 60	
Instructions: 1)Draw neat diagrams 2)Assume suitable data if necessary		

Question No.		Max. Marks
Q.1 (A)	Explain- Global warming. Give its causes and effects and remedies to control global warming.	15
	Or	
Q.1 (B)	Explain the difference between Dependent and Productive population. Explain the occupation composition of population in INDIA.	15
Q.2 (A)	Define- Demographics. Why do demographics matter? Give importance of demographics.	15
	Or	
Q.2 (B)	Explain the term- EIA. Name the projects covers in INDIA using EIA. Explain the process of EIA.	15
Q.3 (A)	Give a short note on following- a) Literacy rate b) Sex ratio in INDIA c) Age & sex pyramid	15
	Or	
Q.3 (B)	<p>Read the given Case Study carefully and answer the following questions.</p> <p style="text-align: center;">NAVI MUMBAI INTERNATIONAL AIRPORT. (NMIA)</p> <p>While the proposed Navi Mumbai international airport did get environmental clearance in November 2010, the Ministry of Environment and Forests (MoEF) has now asked two members of the Standing Committee of National Board for Wildlife (NBWL) to visit the area and prepare a site inspection report. Environmental Impact Assessment (EIA) report for the airport had erred in saying that the proposed airport was 12.5 km away from Karnala bird sanctuary. The EIA report for the Navi Mumbai airport by the Indian Institute of Technology, Mumbai, stated that the location of the airport was 12.5 km away from the Karnala bird sanctuary. The report said, "The Karnala bird sanctuary is situated along the Mumbai-Goa-Konkan National Highway No.17 and is 12.5 km south of the proposed project site and falls outside of core area.</p>	15

	<p>The sanctuary is very rich in avifauna and harbors 147 species of resident and 37 species of migratory birds who visit the sanctuary during winter. Two rare birds i.e. Ashy Minivet and Spotted heart woodpeckers have been sighted here</p> <p>Located 40 km to the east of Mumbai on India's west coast in the Kovar-Panvel area in Navi Mumbai, the airport will displace some 3,500 families living in 10 villages. The affected people have long resisted land acquisition and demanded improved rehabilitation assistance. Beside dislocation of human habitations leading to loss of livelihoods, the site that encompasses 121 hectares of forest, 162 hector of mangroves and 404 Hector of mudflats will be concretized, destroying a unique wildlife habitat. Maharashtra's Forest department in 2017 identified 507 wetlands (369 in forest areas and 118 in non-forest areas) for taking up conservation and management in a holistic manner. Estimated to cost INR 30 billion (USD 413 million), the Navi Mumbai international airport received the government's approval in 2007, delayed as it was due to issues over acquiring land, and securing government approvals, including environmental clearances.</p> <p>Questions:</p> <p>Q.1 Explain the environmental concerns associated with NMIA.</p> <p>Q.2 As an environmental protector, suggest measures to overcome the problems associated with NMIA.</p> <p>Q.3 Conduct SWOC on NMIA.</p>	
Q.4	<p>Choose the correct alternative out of following.</p> <p>1. Demographics analysis used as _____ marketing tool. A) Political B) Business C) Digital D) Social</p> <p>2. _____ of the following is not a quantitative data. A) Sex ratio B) Literacy C) Age D) Politics</p> <p>3. _____ Population refers to the population that can directly contribute to the economy of the country. A) Dead B) Living C) Working D) Juvenile</p> <p>4. _____ of the following is not Demographics. A) Age B) Sex ratio C) Food D) Population</p> <p>5) Vermicomposting is done by _____. A) Fungus B) Bacteria C) Worms D) Animals</p> <p>6) The ecosystem is basic functional unit in _____ as it indicates both living organism and biotic environment. A) Economics B) Ecology C) Argo economics D) Ecotourism</p> <p>7) The fall of moisture from atmosphere to earth's surface in any form is called as _____. A) Evaporation B) Assimilation C) Precipitation D) Filtration</p> <p>8) The chief source of energy in the environment is _____. A) Fire B) Moon C) Sun D) Stars</p>	<p>08</p> <p>01</p> <p>01</p> <p>01</p> <p>01</p> <p>01</p> <p>01</p> <p>01</p>

Q.4 (B)

State whether the following statements are True or False .

- | | |
|--|----|
| 1. Minerals are more evenly distributed resources on the earth. | 01 |
| 2. Mortality is number of death rate per unit area per unit time. | 01 |
| 3. Extensive irrigation contribute to land degradation through salination, alkalization and water logging. | 01 |
| 4. Organic resources such as forest, fish and animals are flow resources. | 01 |
| 5. Literacy is acquiring the skills of reading, writing with understanding. | 01 |
| 6. EIA is based on Principle of prevention and not on principle of curve. | 01 |
| 7. Poverty Alleviation five years plan in INDIA was started in 1951. | 01 |





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Semester (August 2022 to December 2022)		
Examination: End Semester Examination January 2023 (UG Programmes)		
Programme code: 06	Class:	Semester: I
Programme: Bachelors of Business Management	FYBBM	
Name of the Constituent College: S K Somaiya College	Name of the Department : Business Studies	
Course Code: 131U06C101	Name of the Course: Business Environment and Management	
Duration : 2 Hrs.	Maximum Marks : 60	
Instructions: 1)Draw neat diagrams 2)Assume suitable data if necessary		

Question No.		Max. Marks
Q.1	Explain what is Business? Also Explain what is business system process.	15
Q.1	OR	
Q.2	Explain the Economic systems and Business environment	15
Q.2	Elaborate on Directing.	
Q.2	OR	15
Q.3	Explain the two Modern theories of Management	
Q.3	Explain what is leadership and elaborate on the 5 styles of Leadership.	15
Q.3	OR	
Q.3	Case Study: GSK pitched the Horlicks Foodles as a healthier option in instant noodles. Horlicks Foodles is GSK's attempt to get a share of the instant noodles segment. Not just Nestles' Maggi, it had to contend with HUL which had entered the instant noodles snacking segment for the second time with Knorr Soupy Noodles. (It had earlier tried its hand with a tie up with Indo-Nissin for its Smoodles in the 1990s. It had launched and later withdrawn a rice and vegetable based pudding with a chutney mix for evening snack called 4 O'Clock Tiffin). Private labels of large retailers like Future group (Tasty Treat) have gained some traction with their lower price tag. ITC, which has done well for itself in categories like flour, snacks, confectioneries and biscuits, has so far shield away from instant noodles; GSK has chose Horlicks Foodles for its entry into salty foods, a category that hinges on the very subjective criterion of taste. On its target is 6% of the market in a year or so. Health is Wealth: But GSK's Internal studies showed that instant noodles were not usually considered healthy. It found that mothers felt guilty serving instant noodles to children because maida is not as healthy as atta or wholegram wheat. As a result, mothers fortified the noodles with vegetables and eggs. This was a vital clue for GSK before it got started. "The fact that the category is so lopsided presents a bigger opportunity than usual to position oneself as differently and get heard. Even though instant noodles was pre dominantly taste based GSK felt that it could over the nutrition component since it has been long associated with	

	<p>nutrition.</p> <p>GSK Struck a partnership with Nissin the maker of Top Ramen Smoodles, the original Maggi challenger. Nissin helped first in research and then production. The result was a maida product and another noodles made from four different grains as a healthier option. Both contain minerals in their tastemakers. It made a sense to retain Horlicks as the mother brand because of its strong brand equity in the health segment. The brand's India sale alone contributes 70-75% to its global turnover. It also reiterated the association with wellness. To drum in the fact that Foodles stands for nutrition, GSK is now working on a tactical insight from its test launch: It found the need to tag the packs with the respective flavors and the need to be sure that it gives out clues of the noodles being tasty and healthy on the pack itself.</p> <p>Question: A: SWOT and Competitor Analysis for Foodles.</p>	
Q.4	Multiple Choice Questions:	15
A.	<p>Which Political institution defines the boundaries of Business:</p> <p>a: Executive b: Judiciary c: Legislative d: Prime Minister</p>	
B.	<p>_____ is used to regulate the factors of production, including capital, land, labour, and physical resources.</p> <p>a: Technological System b: Demographic system c: Economic system d: Social systems</p>	
C.	<p>Transformational leaders focus on:</p> <p>a: Work the Employees do b: Work they themselves do c: Continuous Improvement d: Fun element in the team</p>	
D.	<p>In Laissez Faire Leadership, decision making is done by:</p> <p>a: Organizations b: Leader c: Subordinates d: None of the above</p>	
E.	<p>Being Efficient means:</p> <p>a: Work the Employees do b: Work they themselves do c: Doing the task correctly d: Fun element in the team</p>	
F.	<p>Leadership Grid is based on which two dimensions:</p> <p>a: Concern for Profit and Concern of Fun b: Concern for Productivity and Concern for People c: Concern for Price and Concern for Product</p>	



	d: Concern for Place and Concern for People	
G.	Management by Objectives was given by a: Henry Fayol b: Max Weber c: Peter F. Drucker d: F.W. Taylor	
H.	_____ is considered as the Pioneer of Management. a: Henry Fayol b: Max Weber c: Peter F. Drucker d: Robert Owen	
I.	SMART Goals stand for: a: Small, Minimum, Actual, Rational, Time bound. b: Specific, Measurable, Acceptable, Realistic, Time-bound. c: Scientific, Maximum, Articulated, Rough, Tested. d: None of the above	
J.	IRCTC is example of: a: Perfect competition b: Oligopoly competition c: Monopolistic Competition d: Monopoly	
K.	In Mixed Economic systems are also called as a: Dual system b: Market system c: Command system d: Individual system	
L.	During Recession, _____ will help increase demand. a: Increase in taxes b: Increase in revenues c: Reduction in Taxes d: No changes in anything.	
M.	In 1991, LPG policy was enacted in India. Full form of LPG is: a: Liquid Petroleum Gas Policy b: Liquidation, Prioritization, Governance Policy c: Liberalization, Privatization, Globalization Policy d: Literacy, Property Government Policy	
N.	Planning is a _____. a: Past Action b: Futuristic Action c: Present Action d: Historic Action	
O.	Transactional leaders focus on: a: Work the Employees do b: Work they themselves do c: Continuous Improvement d: Fun element in the team	



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Semester (August 2022 to December 2022)		
Examination: End Semester Examination January 2023 (UG Programmes)		
Programme code: 06	Class: FYBBM	Semester: I
Programme: Bachelors of Business Managment		
Name of the Constituent College: S K Somaiya College	Name of the Department : Business Studies	
Course Code: 131U06C101	Name of the Course: Business Environment and Management	
Duration : 2 Hrs.	Maximum Marks : 60	
Instructions: 1)Draw neat diagrams 2)Assume suitable data if necessary		

Question No.		Max. Marks
Q.1	Explain what is Business? Elaborate on classification of Business types.	15
Q.1	OR Illustrate on What is Socio - Cultural Environment.	
Q.2	Explain what is Management. Expand on the Contributions of F.W.Taylor.	15
Q.2	OR Compare the Various Leadership styles.	
Q.3	Perform SWOT analysis on Tata's EV segment.	15
Q.3	OR Case Study: Perfetti Van Melle has gone national with Chlormint brand of Chewing gum. Chlormint was first launched in 1997 in its green candy version; soon thereafter a gum variant was launched. But sales took off only in the East. Perfetti then brought in the ice candy version of the brand. So why the National roll out? According to Perfetti Managing Director of the brand Sammer Suneja "Gums are doing very well as a category and he is keen to tap this". Per Capita consumption of gum in India is 8 Pieces per year, compared with 200 Pieces in the US and 100 Pieces in Russia. So there is an upside that confectioners like Perfetti can leverage. The company is pinning its hope on India's growing disposable income as well as changing lifestyles. Besides Chlormint, Perfetti is present in three sub segments of the gum market : Center fresh and Centre Shock is chewing gum, Centre Fruit and Big Babool in bubble gum and Happydent in functional gum. Happydent is more cosmetic brand, Centre Fresh is fruity but Chlormint is a coated gum through which the market will target the young Male Adult. The positioning makes sense considering that half the country's population is below 30. Brand experts believe the product will be consumed by those who smoke and want fresh breath - just like the hand boiled Chlormint Candy. Perfetti has a share of 55% percent of the Rs. 800 Crore chewing gum market and the company hopes to increase this with Chlormint's National Launch. Nielsen pegs this as the fastest growing category in the confectionery segment.	

	<p>Still, why was the brand restricted only to the East? The company never advertised. And now the company isn't leaving anything to the chance. New television campaigns will be followed by online as well as trade activation. Also brand Ambassador Salman Khan will be promoting the Variant.</p> <p>Not surprisingly Khan was roped in around the same time as arch rival Wrigley, which has Boomer and Orbit in its portfolio, introduced Deepika Padukone as its brand ambassador. For its part, Wrigley proudly boasted endorsements from various dental associations worldwide - the World Dental Federation, American Dental Association and 17 others - to promote orbit.</p> <p>Apart from rivals, there are other challenges. To begin with, his Re. 1 Chlormint chewing gum now competes with 25 paisa and 50 paisa confectioneries as impulse purchases. There is no strict brand loyalty. The brand has to contend with internal competition among his brands.</p>	
	<p>Questions:</p> <p>A: Carry out Porter's five force analysis for Chlormint.</p>	
Q.4	Multiple Choice Questions:	15
A.	<p>Business is any activity done to Earn:</p> <p>a: Revenues</p> <p>b: Losses</p> <p>c: Fame</p> <p>d: None of the above</p>	
B.	<p>Which Political institution defines the boundaries of Business:</p> <p>a: Executive</p> <p>b: Judiciary</p> <p>c: Legislative</p> <p>d: Prime Minister</p>	
C.	<p>In Command Economic system, power lies in the hands of</p> <p>a: Public</p> <p>b: Central Bank</p> <p>c: Private Players</p> <p>d: Government</p>	
D.	<p>During Recession, _____ will help increase demand.</p> <p>a: Increase in taxes</p> <p>b: Increase in revenues</p> <p>c: Reduction in Taxes</p> <p>d: No changes in anything.</p>	
E.	<p>IRCTC is example of:</p> <p>a: Perfect competition</p> <p>b: Oligopoly competition</p> <p>c: Monopolistic Competition</p> <p>d: Monopoly</p>	
F.	<p>In 1991, LPG policy was enacted in India. Full form of LPG is:</p> <p>a: Liquid Petroleum Gas Policy</p> <p>b: Liquidation, Prioritization, Governance Policy</p> <p>c: Liberalization, Privatization, Globalization Policy</p> <p>d: Literacy, Property Government Policy</p>	

G.	_____ is used to regulate the factors of production, including capital, land, labour, and physical resources. a: Technological System b: Demographic system c: Economic system d: Social systems	
H.	Being effective means: a: Doing the task correctly, at least possible cost. b: Doing the appropriate task. c: Being multi-tasking d: All of the above	
I.	Neo classical theory pointed out the role of _____ to understand behaviour of individuals a: Psychology and sociology b: Mathematics c: Employer Welfare d: Statistics	
J.	Management by Objectives was given by a: Henry Fayol b: Max Weber c: Peter F. Drucker d: F.W. Taylor	
K.	SMART Goals stand for: a: Small, Minimum, Actual, Rational, Time bound. b: Specific, Measurable, Acceptable, Realistic, Time-bound. c: Scientific, Maximum, Articulated, Rough, Tested. d: None of the above	
L.	Planning is a _____. a: Past Action b: Futuristic Action c: Present Action d: Historic Action	
M.	Transformational leaders focus on: a: Work the Employees do b: Work they themselves do c: Continuous Improvement d: Fun element in the team	
N.	Leadership Grid is based on which two dimensions: a: Concern for Profit and Concern of Fun b: Concern for Productivity and Concern for People c: Concern for Price and Concern for Product d: Concern for Place and Concern for People	
O.	In Laissez Faire Leadership, decision making is done by: a: Organizations b: Leader c: Subordinates d: None of the above	



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Course Code: 131U06C101	Name of the Course: Business Environment and Management	
Duration : 2 Hrs.	Maximum Marks : 60	
Instructions: 1)Draw neat diagrams 2)Assume suitable data if necessary		

Question No.		Max. Marks
Q.1	Explain what is Business? what are the Dynamics of modern Business	15
Q.1	OR Illustrate on What is Socio - Cultural Environment.	
Q.2	Outline on the Principles of Management by Henry Fayol.	15
Q.2	OR Compare the Various Leadership styles.	
Q.3	Elaborate on the following concepts: A: E-commerce B: Network Marketing	15
Q.3	OR Case Study: Perfetti Van Melle has gone national with Chlormint brand of Chewing gum. Chlormint was first launched in 1997 in its green candy version; soon thereafter a gum variant was launched. But sales took off only in the East. Perfetti then brought in the ice candy version of the brand. So why the National roll out? According to Perfetti Managing Director of the brand Sammer Suneja “Gums are doing very well as a category and he is keen to tap this”. Per Capita consumption of gum in India is 8 Pieces per year, compared with 200 Pieces in the US and 100 Pieces in Russia. So there is an upside that confectioners like Perfetti can leverage. The company is pinning its hope on India's growing disposable income as well as changing lifestyles. Besides Chlormint, Perfetti is present in three sub segments of the gum market : Center fresh and Centre Shock is chewing gum, Centre Fruit and Big Babool in bubble gum and Happydent in functional gum. Happydent is more cosmetic brand, Centre Fresh is fruity but Chlormint is a coated gum through which the market will target the young Male Adult. The positioning makes sense considering that half the country's population is below 30. Brand experts believe the product will be consumed by those who smoke and want fresh breath - just like the hand boiled Chlormint Candy. Perfetti has a share of 55% percent of the Rs. 800 Crore chewing gum market and the company hopes to increase this with Chlormint's National Launch. Nielsen pegs this as the fastest growing category in the confectionery segment. Still, why was the brand restricted only to the East? The company never advertised. And	

	<p>now the company isn't leaving anything to the chance. New television campaigns will be followed by online as well as trade activation. Also brand Ambassador Salman Khan will be promoting the Variant.</p> <p>Not surprisingly Khan was roped in around the same time as arch rival Wrigley, which has Boomer and Orbit in its portfolio, introduced Deepika Padukone as its brand ambassador. For its part, Wrigley proudly boasted endorsements from various dental associations worldwide - the World Dental Federation, American Dental Association and 17 others - to promote orbit.</p> <p>Apart from rivals, there are other challenges. To begin with, his Re. 1 Chlormint chewing gum now competes with 25 paisa and 50 paisa confectioneries as impulse purchases. There is no strict brand loyalty. The brand has to contend with internal competition among his brands.</p> <p>Questions: A: Carry out Porter's five force analysis for Chlormint.</p>	
Q.4	Multiple Choice Questions:	15
A.	<p>Business is any activity done to Earn:</p> <p>a: Revenues b: Losses c: Fame d: None of the above</p>	
B.	<p>Transactional leaders focus on:</p> <p>a: Work the Employees do b: Work they themselves do c: Continuous Improvement d: Fun element in the team</p>	
C.	<p>Management by Objectives was given by</p> <p>a: Henry Fayol b: Max Weber c: Peter F. Drucker d: F.W. Taylor</p>	
D.	<p>During Recession, _____ will help increase demand.</p> <p>a: Increase in taxes b: Increase in revenues c: Reduction in Taxes d: No changes in anything.</p>	
E.	<p>Which Political institution defines the boundaries of Business:</p> <p>a: Executive b: Judiciary c: Legislative d: Prime Minister</p>	
F.	<p>Business System Process in line are as follows:</p> <p>a: Organizing, Production, Marketing b: Production, Organizing, Marketing c: Planning, Forecasting, Marketing d: Marketing, Production, Organizing</p>	
G.	<p>_____ is used to regulate the factors of production, including capital, land, labour, and physical resources.</p>	

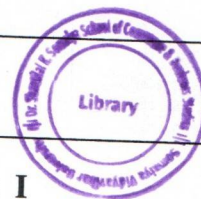
	a: Technological System b: Demographic system c: Economic system d: Social systems	
II.	Being effective means: a: Doing the task correctly, at least possible cost. b: Doing the appropriate task. c: Being multi-tasking d: All of the above	
I.	Neo classical theory pointed out the role of _____ to understand behaviour of individuals a: Psychology and sociology b: Mathematics c: Employer Welfare d: Statistics	
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VIDYAVIHAR UNIVERSITY

Semester: January / 2023
Examination: ISE Examination



Programme code:

131U06K101

Class: FYBBM

Semester: I

Programme:

BBM

Name of the Constituent College: S K Somaiya College

Name of the department: Business Studies

Name of the Course: Business Communication Skills

Instructions: 1) Figures to the right indicate maximum marks.

Section	Questions	Max. Marks
Q1. A.	Prepare the minutes of a Meeting, presided by the Chairman of HKU Pvt LTD, an FMCG company. The main agenda of the meeting was introducing a new product, fixing a cost, discussing the sales, marketing, and advertising strategies.	15
	OR	
Q1. B.	You are Mr. Sunil Kaushik, the administrator of Gyan Jyoti Institute. Certain areas of your infrastructure need to reconstructed and revamped. You have been asked to prepare a report on the matter for the managing committee of the institute, stating the specific buildings that need facelift, and the areas that need attention. Use the formal report format and prepare a report in 250-300.	15
Q2. A.	Bring out the significance of using grapevine as a channel of communication in an organization using examples.	7
B.	Construct a complaint letter to ABC Enterprises Pvt Ltd about 10 electronic bulbs being defective out of 100 pieces delivered.	8
	OR	
Q2. C.	As the HR Manager of your organization, draft a memo for the sales employees, informing them about changes in their working hours.	7
D.	Dictaphone was the need of the day for some professionals before the introduction of smartphones. Illustrate the above sentence with reference to dictaphone with example of your choice.	8
Q3. A.	Discuss the set of personal etiquettes that needs to considered while being a part of the society?	7
B.	Create your resume in chronological order.	8

	OR	
C.	Contrast the advantages and disadvantages of non-verbal communication using examples.	7
D.	Distinguish between various types of communication using examples.	8

Q 4	Multiple Choice Questions		15
	i)	The group discussion assesses the candidate's ability to: a) Control others b) Confer with others on a specified subject c) Argue with others d) Lead others	
	ii)	Which is not compulsory to mentioned in a job description CV? a) Date b) Name c) Nationality d) Education	
	iii)	Which of the following kinds of communication do students spend most time engaged in a) Listening b) Speaking c) Writing d) Reading	
	iv)	Grapevine communication is associated with _____ communication. a) Formal b) Informal c) Horizontal d) Vertical	
	v)	The rapid spread of a message about a new product of services is called _____. a) Viral marketing b) Vertical market c) Virtual organization d) Viral sales	
	vi)	A memorandum is considered a brief form of written communication _____. a) Formal use b) Internal use c) Legal use d) External use	
	vii)	Good business letters are characterized by the following personal quality of the writer _____. a) Humor b) Sincerity c) Formality	

		d) Seriousness	
	viii)	How we can address the recipient when we are writing an informal letter? a) Dear Mr. b) Hello Sir/Madam c) Dear Sir/Madam d) My dear	
	ix)	In the workplace, which of these actions is appropriate? a) Discuss politics b) Keep your work-related conversations vague c) Avoid chit-chat d) Change your mind often	
	x)	Sender needs a _____ to send out a message. a) Medium b) Feedback c) Vehicle d) Fee	
	xi)	When a message is expressed using gestures or signs, it is _____. a) Oral b) Verbal c) Non-verbal d) Audio-visual	
	xii)	The message that gets no response is not _____. a) Lost b) Symbolic c) Communicated d) Tolerated	
	xiii)	Employers appreciate workers who do which of the following: a) Ask for help when needed b) Always leave promptly when work hours are over c) Use speakerphone for all calls d) Generously decorate common office space	
	xiv)	The key point of a formal letter is written in which part of a formal letter? a) Postscript b) Body c) Opening d) Closing	
	xv)	The application letter is? a) A foreword b) A description of your main strengths and suitability for the job c) A summary of your qualifications and experiences d) A statement of your job objective	





SOMAIYA
VIDYAVIHAR UNIVERSITY



Semester: January / 2023
Examination: ISE Examination

Programme code: 131U06K101		Class: FYBBM	Semester: I
Programme: BBM			
Name of the Constituent College: S K Somaiya College		Name of the department: Business Studies	
Name of the Course: Business Communication Skills			
Instructions: 1) Figures to the right indicate maximum marks.			

Section	Questions	Max. Marks
Q1. A.	Prepare a report on a fire in slum cluster in Dharavi in 250 – 300 words which needs to be submitted to the Brihanmumbai Municipal Corporation. You are Amit/Amita Razdan, a reporter of the 'The Times of India.'	15
	OR	
Q1. B.	The Managing Committee of Bharat Shiksha Institute has decided to bring changes in the English and Accountancy syllabus for the first-year course. Mr. Kamal Kapoor, the academic Dean has been assigned the task of convening the meeting of all subject experts, lecturers, students and members from print and publishing department to deice the necessary alterations in the syllabus. As Kamal Kapoor - (a) Set an agenda for the meeting (b) Assign your secretary, Ms. Swati Singh to write the minutes of the meeting.	15
Q2. A.	Outline the importance of group discussion and acknowledge based on types.	7
B.	You are Purchase Manager Vivek Shukla of an MNC. Draft a letter to place an order for 100 toys for an orphanage.	8
	OR	
Q2. C.	As the HR of HDEF Bank, draft a memo, to be distributed to front desk employees about certain changes in dress code.	7
D.	Identify the demerits of silence. Using examples, write a note on it.	8
Q3. A.	"Communication pervades the whole organization in the same way in which atmosphere prevails around us." Discuss.	7

B.	Compare the advantages and disadvantages of teleconferencing.	8
OR		
C.	Classify the set of etiquette that needs to follow during a meeting.	7
D.	Identify yourself as RJ Naved running a show called 'chit chat and chai.' List down the points to be kept in mind while conversing with your audiences.	8

Q 4	Multiple Choice Questions		15
	i)	Comments such as "yeah," "right," and "mm-hm" are examples of ____ a) Polite interrupting expressions b) Active listening techniques c) Irritating background noise d) Ways of signing off	
	ii)	_____ is a result of self- discipline, inner trust, and a decision to be relentlessly in all solutions. a) Exercise b) Integrity c) Work d) Mind	
	iii)	_____ is a tool requiring skill usage. a) Silence b) Distractions c) Attentiveness d) Feedback	
	iv)	The framing of a message for sending is known as _____. a) Decoding b) Arranging c) Encoding d) Printing	
	v)	Effective speakers _____ for a moment before an important point. a) Pause b) Smile c) Frown d) Scream	
	vi)	The traditional resume is called the _____ resume. a) Chronological b) Functional c) Combined d) CV	
	vii)	Topics that will present at the next Board meeting is an example of an? a) Memo	



		b) Agenda c) Minutes d) Formal letter	
	viii)	_____ letter appreciates employee professionalism. a) Memorandum b) Testimonial c) Appreciation d) Discouragement	
	ix)	_____ reveals the identity of the sender. a) Salutation b) Subject line c) Head address d) Body of the letter	
	x)	A jargon is _____ a) A jar not in use b) Gong of a bell c) An inert gas d) Technical word	
	xi)	Communication is a _____ a) One-way process b) Two-way process c) Three-way process d) Four-way process	
	xii)	In a group discussion, one must communicate with _____ a) Emotions b) Long answers c) Knowledge d) Ignorance	
	xiii)	Forms of communication in which words are used to convey message are referred to as _____. a) Visual communication b) Verbal communication c) Non-verbal communication d) Visual communication	
	xiv)	Ego block is created due to _____ a) Language barriers b) Physical barriers c) Psychological barriers d) Cross-cultural barriers	
	xv)	When a message is expressed using gestures or signs, it is _____. a) Oral b) Verbal c) Non-verbal d) Audio-visual	



SOMAIYA
VIDYAVIHAR UNIVERSITY



Semester (August 2022 to December 2022)		
Examination: End Semester Examination January 2023 (UG Programs)		
Programme code: Programme: BBA/BBM	Class: FYBBA / FYBBM	Semester: I
Name of the Constituent College: S.K Somaiya College		Name of the Department: Business studies
Course Code: 131U07C102/131U06C103	Name of the Course: Micro Economics/Business Economics	
Duration: 2 Hrs.	Maximum Marks: 60	
Instructions: 1) Draw neat diagrams 2) Assume suitable data if necessary		

Question No.		Max. Marks
Q.1(A)	Define Economics. Explain its scope and significance.	15
	OR	
Q.1(B)	Examine the Law of DMU. State its Importance and Limitations.	
Q.2(A)	Explain Elasticity of Demand. Explain the methods of measuring elasticity of demand.	15
	OR	
Q.2(B)	Explain Law of supply. Discuss the determinants of law of supply.	
Q.3 (A)	Examine the Law of returns to scale.	15
	OR	
Q.3 (B)	Explain Isoquants. Discuss the properties of isoquants.	
Q.4	Multiple Choice Questions (All questions carry 1 mark each)	15
1.	Macro Economics is also called as _____ economics. (a) Applied (b) Aggregate (c) Experimental (d) None of the above	
2.	If regardless of changes in its price, the quantity demanded of a good remains unchanged, then the demand curve for the good will be: (a) Horizontal (b) Vertical (c) Positively sloped (d) Negatively sloped	

	<p>A firm has a variable cost of Rs. 1000 at 5 units of output. If fixed costs are Rs. 400, the average total cost at five units of output will be:</p> <p>(a) Rs. 280 (b) Rs. 80 (c) Rs. 200 (d) Rs. 1400</p>	
4.	<p>In the short run, when the output of a firm increases, its average fixed cost:</p> <p>(a) Increases (b) Decreases (c) Remains constant (d) First declines & then rises</p>	
5.	<p>If price of computers increases by 10% and supply increases by 25%, the elasticity of supply is:</p> <p>(a) 2.5 (b) 0.4 (c) (-) 2.5 (d) (-) 0.4</p>	
6.	<p>The definition "Science which deals with wealth of nation" was given by:</p> <p>(a) Alfred Marshall (b) A C Pigou (c) Adam Smith (d) J B Say</p>	
7.	<p>All of the following are determinants of demand except:</p> <p>(a) Tastes & preferences (b) Quantity supplied (c) Income of the consumer (d) Price of related goods</p>	
8.	<p>Mollie derives total utility of 10 utils after having 4 mangoes and total utility on consuming 5 mangoes is 9, then her marginal utility for 5th mango is:</p> <p>(a) +1 util (b) 0 util (c) -1 util (d) 9 utils</p>	
9.	<p>Marginal cost changes due to changes in _____</p> <p>(a) Total cost (b) Average cost (c) Variable cost (d) Quantity of output</p>	

Given the following four possibilities, _____ results in an increase in total consumer expenditure.

- (a) Demand is unitary elastic & price falls
- (b) Demand is elastic & price rises
- (c) Demand is inelastic & price falls
- (d) Demand is inelastic & price rises



11. The cross elasticity between bread & DVDs is:

- (a) Positive
- (b) Negative
- (c) Zero
- (d) One

12. The slope of indifference curve is equal to:

- (a) One
- (b) Marginal utility
- (c) Marginal rate of substitution
- (d) None of these

13. Isoquant is always _____ sloping.

- (a) Upward
- (b) Downward
- (c) Concave
- (d) Positive

14. Expansion in demand leads to:

- (a) Rightwards shift in demand curve
- (b) Downward movement along the demand curve
- (c) Upward movement along the demand curve
- (d) Leftwards shift in demand curve

15. When AP falls due to increase in quantity of variable input:

- (a) $MP < AP$
- (b) $MP = AP$
- (c) $MP > AP$
- (d) None of these



SOMAIYA
VIDYAVIHAR UNIVERSITY



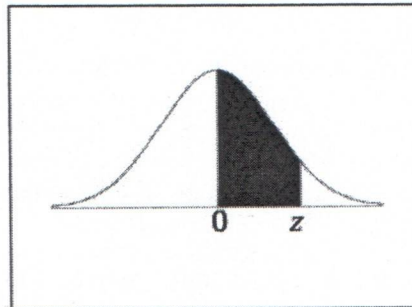
Semester: January 2023 _____		
Examination: ESE Examination		
Programme code: Programme: Bachelor of Business Management	Class: FY	Semester: I (SVU 2022)
Name of the Constituent College: S K Somaiya College	Name of the department/Section/Center: Department of Business Studies	
Course Code: 131U06C104	Name of the Course: Business Statistics	
Instructions: 1. Assume suitable data, if necessary. 2. In Q.4(a) each question is of true/false type and carries 1 mark. 3. In Q.4(b) each question is fill in the blanks type and carries 1 mark.		

Questi on No.									Max. Marks																		
Q.1									15 marks																		
(a)	If the mode of the following distribution is Rs.340, find the missing frequencies and hence find the median.								10																		
<table><tr><td>Daily wages in Rs.</td><td>0-100</td><td>100- 200</td><td>200- 300</td><td>300- 400</td><td>400- 500</td><td>500- 600</td><td>600- 700</td><td>Total</td></tr><tr><td>No. of workers</td><td>4</td><td>16</td><td>60</td><td>--</td><td>--</td><td>6</td><td>4</td><td>230</td></tr></table>									Daily wages in Rs.	0-100	100- 200	200- 300	300- 400	400- 500	500- 600	600- 700	Total	No. of workers	4	16	60	--	--	6	4	230	
Daily wages in Rs.	0-100	100- 200	200- 300	300- 400	400- 500	500- 600	600- 700	Total																			
No. of workers	4	16	60	--	--	6	4	230																			
(b)	From the following data, find the standard deviation.								5																		
<table><tr><td>Marks</td><td>0-5</td><td>5-10</td><td>10-15</td><td>15-20</td><td>20-25</td><td>25-30</td><td>30-35</td><td>35-40</td></tr><tr><td>No. of students</td><td>2</td><td>4</td><td>7</td><td>13</td><td>21</td><td>16</td><td>8</td><td>3</td></tr></table>									Marks	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	No. of students	2	4	7	13	21	16	8	3	
Marks	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40																			
No. of students	2	4	7	13	21	16	8	3																			
OR																											
(c)	If the mean for the following data is Rs.560, find the missing frequency and hence find the mode of the data.								8																		
<table><tr><td>Daily wages in Rs.</td><td>300-400</td><td>400-500</td><td>500-600</td><td>600-700</td><td>700-800</td><td>800-900</td></tr><tr><td>No. of persons</td><td>10</td><td>20</td><td>40</td><td>--</td><td>8</td><td>6</td></tr></table>									Daily wages in Rs.	300-400	400-500	500-600	600-700	700-800	800-900	No. of persons	10	20	40	--	8	6					
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(d)	Calculate quartile deviation and its relative measure for the following:								7																		
<table><tr><td>Values</td><td>20-29</td><td>30-39</td><td>40-49</td><td>50-59</td><td>60-69</td><td>70-79</td></tr><tr><td>Frequency</td><td>30</td><td>45</td><td>44</td><td>30</td><td>18</td><td>20</td></tr></table>									Values	20-29	30-39	40-49	50-59	60-69	70-79	Frequency	30	45	44	30	18	20					
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Q.2		15 marks																																		
(a)	<p>Using least squares method, find the best fit linear trend line for the data and estimate the production for the years 2007 and 2009.</p> <table><tr><td>Year</td><td>1999</td><td>2000</td><td>2001</td><td>2002</td><td>2003</td><td>2004</td><td>2005</td></tr><tr><td>Production (in thousands)</td><td>14</td><td>15</td><td>17</td><td>16</td><td>17</td><td>20</td><td>23</td></tr></table>	Year	1999	2000	2001	2002	2003	2004	2005	Production (in thousands)	14	15	17	16	17	20	23	10																		
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(b)	<p>Find the Karl Pearson's correlation coefficient for the data.</p> <table><tr><td>X</td><td>4</td><td>7</td><td>8</td><td>9</td><td>10</td><td>13</td></tr><tr><td>Y</td><td>5</td><td>6</td><td>9</td><td>10</td><td>12</td><td>15</td></tr></table>	X	4	7	8	9	10	13	Y	5	6	9	10	12	15	5																				
X	4	7	8	9	10	13																														
Y	5	6	9	10	12	15																														
OR																																				
(c)	<p>Find the Spearman's rank correlation coefficient for the data.</p> <table><tr><td>X</td><td>25</td><td>43</td><td>25</td><td>40</td><td>16</td><td>25</td><td>43</td><td>50</td><td>60</td></tr><tr><td>Y</td><td>30</td><td>40</td><td>30</td><td>40</td><td>20</td><td>32</td><td>40</td><td>32</td><td>30</td></tr></table>	X	25	43	25	40	16	25	43	50	60	Y	30	40	30	40	20	32	40	32	30															
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Y	30	40	30	40	20	32	40	32	30																											
(d)	<p>Construct Laspeyre's , Paasche's and Fisher's index number from the following data.</p> <table><tr><th rowspan="2">Commodities</th><th colspan="2">Base year = 1990</th><th colspan="2">Current year = 2000</th></tr><tr><th>Prices</th><th>Quantities</th><th>Prices</th><th>Quantities</th></tr><tr><td>Rice</td><td>20</td><td>8</td><td>25</td><td>5</td></tr><tr><td>Wheat</td><td>25</td><td>7</td><td>38</td><td>6</td></tr><tr><td>Pulses</td><td>22</td><td>10</td><td>35</td><td>4</td></tr><tr><td>Maize</td><td>20</td><td>5</td><td>30</td><td>5</td></tr><tr><td>Others</td><td>15</td><td>7</td><td>25</td><td>7</td></tr></table>	Commodities	Base year = 1990		Current year = 2000		Prices	Quantities	Prices	Quantities	Rice	20	8	25	5	Wheat	25	7	38	6	Pulses	22	10	35	4	Maize	20	5	30	5	Others	15	7	25	7	7
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Q.3		15 marks																																		
(a)	<p>A box contains 8 blue and 7 red balls. Five balls are selected at random from the box. Find the probability that</p> <p>(i) exactly 3 red balls are selected</p> <p>(ii) at least three red balls are selected</p> <p>(iii) at most 4 blue balls are selected</p> <p>(iv) at least two balls of each color are selected.</p>	10																																		
(b)	<p>A certain coin showed up heads on 270 occasions in 500 tosses. Test the claim that the coin is unbiased for $\alpha = 5\%$.</p>	5																																		
OR																																				

(c)	Two samples of 150 and 200 balls drawn from two different lots gave 5% and 7% defective balls respectively. Test whether both the lots come from the balls manufactured by the same process. Take level of significance = 5%, 1%. Which test should be used to test the claim?	10
(d)	Find the probability of 1. throwing at most two sixes in six throws of a single die. 2. getting 5 exactly twice in 7 throws of a single die.	5
Q.4	Objective Type Questions	15 marks
Q.4 (a)	1) An event is a subset of the sample space. (True/False) 2) A bernoulli trial has only two type of outcomes. (True/False) 3) The probability of an event cannot be 1.001. (True/False) 4) In normal distribution of a random variable, the probability represents the area under the probability curve. (True/False) 5) Bias = Expected Value – Actual Value. (True/False) 6) $P(Z < 1.58) = 0.4429$. (True/False) 7) Error involved in rejecting H_0 when H_0 was actually true is called Type I error. (True/False) 8) Sample proportion is a parameter. (True/False)	8 marks
Q.4 (b)	1. If events A and B are complementary events, then $P(A \cap B) = \dots\dots\dots$ 2. Using Addition theorem of probability, $P(A \cup B) = \dots\dots\dots$ 3. Probability of getting more than two tails in two tosses of a fair coin is 4. By Multiplication theorem of probability, $P(A \cap B) = \dots\dots\dots$ 5. For a large sample, the formula for Z statistic is $Z = \dots\dots\dots$ 6. Formula for standard error for difference in two means from two large samples is 7. The region where H_0 is rejected is called	7 marks

Level of Significance	Rejection Criteria for		
	Two tailed test $\mu \neq \mu_0$	Left tailed test $\mu < \mu_0$	Right tailed test $\mu > \mu_0$
10%	$ Z > 1.64$	$Z < -1.28$	$Z > 1.28$
5%	$ Z > 1.96$	$Z < -1.64$	$Z > 1.64$
2%	$ Z > 2.33$	$Z < -2.05$	$Z > 2.05$
1%	$ Z > 2.58$	$Z < -2.33$	$Z > 2.33$
Almost nil	$ Z > 3$	$Z < -3$	$Z > 3$

[illegible]



SOMAIYA
VIDYAVIHAR UNIVERSITY



Semester: January 2023 _____
Examination: ESE Examination

Programme code:
Programme: Bachelor of Business Management

Class: FY

Semester: I
(SVU 2022)

Name of the Constituent College:
S K Somaiya College

Name of the
department/Section/Center:
Department of Business Studies

Course Code: 131U06C104

Name of the Course: Business Statistics

Instructions: 1. Assume suitable data, if necessary.
2. In Q.4(a) each question is of true/false type and carries 1 mark.
3. In Q.4(b) each question is of fill in the blanks type and carries 1 mark.

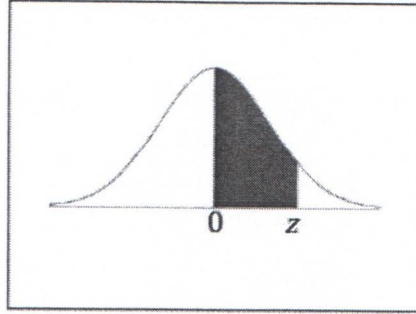
Questi No.		Max. Marks																		
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(a)	If the Mean for the following data is Rs.562, find the missing frequency and hence find the Median for the data. <table><tr><td>Daily wages in Rs.</td><td>300-400</td><td>400-500</td><td>500-600</td><td>600-700</td><td>700-800</td><td>800-900</td></tr><tr><td>No. of persons</td><td>10</td><td>20</td><td>40</td><td>--</td><td>8</td><td>7</td></tr></table>	Daily wages in Rs.	300-400	400-500	500-600	600-700	700-800	800-900	No. of persons	10	20	40	--	8	7	10				
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(b)	The average monthly sales, for the first few months, for a salesman was Rs. 5000. For the remaining months of the year his performance was improved with average sales of Rs. 7000 per month. This resulted in his average sales per month for the entire year being Rs. 6500. Find the number of months for which his average monthly sales was Rs. 5000.	5																		
	OR																			
(c)	From the following data, find the standard deviation and its relative measure. <table><tr><td>Marks</td><td>5-10</td><td>10-15</td><td>15-20</td><td>20-25</td><td>25-30</td><td>30-35</td><td>35-40</td><td>40-45</td></tr><tr><td>No. of students</td><td>7</td><td>9</td><td>10</td><td>12</td><td>7</td><td>9</td><td>12</td><td>15</td></tr></table>	Marks	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	No. of students	7	9	10	12	7	9	12	15	8
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(d)	Calculate quartile deviation for the following data. <table><tr><td>Values</td><td>20-30</td><td>30-40</td><td>40-50</td><td>50-60</td><td>60-70</td><td>70-80</td></tr><tr><td>Cumulative frequency (less than type)</td><td>45</td><td>75</td><td>140</td><td>187</td><td>231</td><td>250</td></tr></table>	Values	20-30	30-40	40-50	50-60	60-70	70-80	Cumulative frequency (less than type)	45	75	140	187	231	250	7				
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Q.2		15 marks																																		
(a)	Using least squares method, find the best fit linear trend line for the data and estimate the production for the years 2007 and 2009.	10																																		
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Production (in thousands)	14	15	17	16	17	20	23																													
(b)	Find the Karl Pearson's correlation coefficient for the data.	5																																		
	<table><tr><td>X</td><td>145</td><td>140</td><td>142</td><td>138</td><td>137</td><td>144</td></tr><tr><td>Y</td><td>90</td><td>95</td><td>89</td><td>92</td><td>94</td><td>87</td></tr></table>	X	145	140	142	138	137	144	Y	90	95	89	92	94	87																					
X	145	140	142	138	137	144																														
Y	90	95	89	92	94	87																														
	OR																																			
(c)	Draw the time series graph and determine secular or simple trend line by method of four yearly moving averages for the below given data.	8																																		
	<table><tr><td>Year(X)</td><td>2012</td><td>2013</td><td>2014</td><td>2015</td><td>2016</td><td>2017</td><td>2018</td><td>2019</td><td>2020</td><td>2021</td></tr><tr><td>No. of people losing jobs(Y)</td><td>300</td><td>400</td><td>150</td><td>170</td><td>175</td><td>180</td><td>190</td><td>220</td><td>540</td><td>350</td></tr></table>	Year(X)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	No. of people losing jobs(Y)	300	400	150	170	175	180	190	220	540	350													
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(d)	Construct Laspeyre's , Paasche's and Kelly's index number from the following data.	7																																		
	<table><tr><th rowspan="2">Commodities</th><th colspan="2">Base year = 1990</th><th colspan="2">Current year = 2000</th></tr><tr><th>Prices</th><th>Quantities</th><th>Prices</th><th>Quantities</th></tr><tr><td>Rice</td><td>24</td><td>9</td><td>45</td><td>8</td></tr><tr><td>Wheat</td><td>15</td><td>7</td><td>28</td><td>10</td></tr><tr><td>Pulses</td><td>24</td><td>12</td><td>35</td><td>6</td></tr><tr><td>Maize</td><td>25</td><td>8</td><td>42</td><td>6</td></tr><tr><td>Others</td><td>10</td><td>7</td><td>25</td><td>9</td></tr></table>	Commodities	Base year = 1990		Current year = 2000		Prices	Quantities	Prices	Quantities	Rice	24	9	45	8	Wheat	15	7	28	10	Pulses	24	12	35	6	Maize	25	8	42	6	Others	10	7	25	9	
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Q.3		15 marks																																		
(a)	If the height of 400 patients in a hospital is normally distributed with mean 65.5 inches and standard deviation 3.5 inches. How much percent of patients have height (i) less than 62 inches (ii) between 60 and 65 inches (iii) more than 66 inches (iv) between 64 inches and 68 inches?	10																																		
(b)	A coin is tossed 900 times and heads appear 470 times. Does this result support the hypothesis that the coin is unbiased? Use a 1% level of significance.	5																																		
	OR																																			

(c)	The mean breaking strength of the table supplied by a manufacturer is 1800 units with a standard deviation of 100 units. By a new technique in the manufacturing process, it is claimed that the breaking strength of the tables have increased. To test this claim, a sample of 50 tables is tested. It is found that the mean breaking strength is 1850. Can we support the claim at 0.05, 0.02 level of significance? Which test should be used to test the claim?	10														
(d)	Following is the probability distribution of number of smart phones sold in a shop per day. Find the value of k and $E(X)$.	5														
	<table><tr><td>$X=x$</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>$P(X=x)$</td><td>k</td><td>0.3</td><td>0.15</td><td>0.15</td><td>0.1</td><td>$2k$</td></tr></table>	$X=x$	0	1	2	3	4	5	$P(X=x)$	k	0.3	0.15	0.15	0.1	$2k$	
$X=x$	0	1	2	3	4	5										
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Q.4	Objective Type Questions	15 marks														
Q.4 (a)	<div>1) If $P(A) = 1$, then A is an impossible event. (True/False)</div> <div>2) In normal distribution of a random variable, the probability curve is symmetric about the mean. (True/False)</div> <div>3) $P(Z < 1.1) = 0.8643$. (True/False)</div> <div>4) If A and B are two mutually exclusive events, then $P(A \cap B) = 1$. (True/False)</div> <div>5) Sample standard deviation is a statistic. (True/False)</div> <div>6) In a two tailed test, the rejection region lies on both sides of the normal curve. (True/False)</div> <div>7) Error involved in accepting H_0 when H_0 was actually false is called Type I error. (True/False)</div> <div>8) Population proportion is a parameter. (True/False)</div>	8 marks														
Q.4 (b)	<div>1. $P(Z > 2.1) = \dots\dots\dots$</div> <div>2. Using Addition theorem, $P(A \cup B) = \dots\dots\dots$</div> <div>3. Probability of getting exactly two tails in three tosses of a fair coin is $\dots\dots\dots$</div> <div>4. By Multiplication theorem of probability, $P(A B) = \dots\dots\dots$</div> <div>5. For a large sample of size $n \geq 40$, the formula for Z statistic is $Z = \dots\dots\dots$</div> <div>6. Formula for standard error for difference in two proportions from two large samples is $\dots\dots\dots$</div> <div>7. Error involved in rejecting H_0 when H_0 was actually true is called $\dots\dots\dots$</div>	7 marks														

	Rejection Criteria for		
Level of Significance	Two tailed test $\mu \neq \mu_0$	Left tailed test $\mu < \mu_0$	Right tailed test $\mu > \mu_0$
10%	$ Z > 1.64$	$Z < -1.28$	$Z > 1.28$
5%	$ Z > 1.96$	$Z < -1.64$	$Z > 1.64$
2%	$ Z > 2.33$	$Z < -2.05$	$Z > 2.05$
1%	$ Z > 2.58$	$Z < -2.33$	$Z > 2.33$
Almost nil	$ Z > 3$	$Z < -3$	$Z > 3$

Standard Normal Distribution Table

[illegible]