



## FYBCOM-I-ATKT-FEB/MAR-2023-AFM

- 3) Cash price includes both Hire purchase price and total interest.
- 4) AS-9 Revenue recognition applies to Sale of goods only.
- 5) Patents and copyrights are tangible Fixed assets.
- 6) Closing stock of Work in progress is shown on Trading account credit side.
- 7) Capital Expenditure is generally non-recurring in nature.
- 8) Outstanding expenses are shown on the liability side of the balance sheet.
- 9) Work in progress stock of a manufacturing concern implies partly finished or semi-finished goods.
- 10) Unrealised profit from departmental closing stock is shown on General profit and loss account debit side.
- 11) Revenue receipts are generally recurring in nature.
- 12) Discount received is apportioned amongst departments in Purchase ratio.

Q.2 The opening stock, purchases and sales of a trader for the month ending on 31<sup>st</sup> January 2022 are given below. [20]

	PRODUCTS			
	Aex		Wye	
	Units	RS.	Units	RS.
Opening stock	1000 units @ RS. 5 per unit		1000 units @ RS. 5 per unit	
<b><u>Purchases</u></b>				
5 <sup>th</sup> January	800 units @ Rs. 4.00 per unit		1600 units @ Rs.3.50 per unit	
20 <sup>th</sup> January	750 units @ Rs. 3.50 Per unit		800 units @ Rs. 4.00 per unit	
<b><u>Sales</u></b>				
4 <sup>th</sup> January	300 units		200 units	
10 <sup>th</sup> January	400 units		800 units	
17 <sup>th</sup> January	200 units		300 units	
25 <sup>th</sup> January	500 units		1000 units	
Market Price as on 31 <sup>st</sup> January	@ Rs. 3.75 per unit		@ RS. 3.75 per unit	

You are required to value: -

The closing stock applying First-in-first-out (FIFO) to product Aex and Weighted average method (WAM) to product Wye

**OR**

Q.2 Mr. Kapil purchased from Maruti Udyog Ltd. a Motor van on 1st January 2019 the cash price being Rs 1,64,000. The purchase was on hire purchase basis, Rs 50,000 being paid on the signing of the contract on 1<sup>st</sup> January 2019 and balance paid in three annual instalments Rs 50,000 each on 31st December every year. Interest was charged at 15% per annum. Depreciation was written off at the rate of 20 per cent per annum on the reducing instalment system. Mr. Kapil closes his books every year on 31st December. Prepare Motor Van a/c, Interest a/c, Maruti Udyog Ltd.'s a/c for years 2019, 2020 & 2021 in the books of Mr. Kapil [20]

Q.3 Write whether the following expenditure/ receipts are capital/ revenue in nature along with the reasons in support thereof. [20]

1. Cost of stores consumed in manufacturing machinery for installation in own factory.
2. Spent towards addition to machinery to double the production, Rs. 40,000
3. Spent for alteration of existing plant which would result in reduction in cost of production.
4. Purchase of second-hand Printer for Rs. 600 and incurred Rs. 100 to bring it in working condition.
5. Repayment of loan taken earlier
6. Expenditure incurred on purchase of stationary for use in the office.
7. Rs. 20,000 received from issue of Shares.
8. Money received from sale of old machinery
9. Interest received on loans given.
10. Money received from sale of goods.

**OR**

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Q.3 Following figures are extracted from the books of Naseebdar Ltd. for the year ended 31<sup>st</sup> December 2022. [20]

Particulars	Departments		
	A Rs.	B Rs.	C Rs.
Purchases	8,00,000	10,00,000	2,00,000
Sales	12,00,000	18,00,000	6,00,000
Wages	16,000	10,000	14,000
Stock on 1-1-2022	90,000	70,000	80,000
Stock on 31-12-2022	1,30,000	40,000	20,000

**Other Informations:**

- (1) Goods transferred from A to B Rs. 20,000 and to C Rs. 16,000.
- (2) Goods transferred from C to A Rs. 10,000 and to B Rs. 12,000.
- (3) Goods transferred from B to A Rs. 13,000 and to C Rs. 11,200.
- (4) Telephone charges Rs. 31,600 to be apportioned in the ratio of 3: 1: 1 among Departments A, B and C respectively.
- (5) Rent Rs. 48,000 to be divided as 1:2:1 among Departments A, B and C respectively.

**(6) Other Expenses:**

Discount Allowed	Rs. 36,000	Legal Expenses	Rs. 48,000
Bad debt	Rs. 30,000	Comprehensive Insurance Premium	Rs. 1,16,000

You should allocate aforesaid Expenses as you deem best indicating the basis of allocation.

All working should form a part of your answer:

Prepare Departmental Trading and Profit and Loss a/c in columnar form and General Profit Loss Account for the year ended 31<sup>st</sup> December 2022

Q.4 From the following Trial Balance of Mr. Kanha as on 31.03.2022; you are required to prepare Manufacturing, Trading, Profit and Loss a/c for year ended 31<sup>st</sup> March 2022 and a Balance sheet as on that date. [20]

Particulars	Debit	Credit
<b>Opening Stock</b>		
Raw materials	10,000	
Work in progress	10,000	
Finished goods	10,000	
Purchase of R.M.	1,00,000	
Wages	10,000	
Factory expenses	10,000	
Sale of factory scrap		4,000
Sales		2,00,000
Office salary	10,000	
Sundry expenses	10,000	
Capital		1,00,000
Debtors	1,00,000	
Creditors		1,00,000
Furniture	46,000	
Machinery	50,000	
Cash	2,000	
Bank	31,000	
Bad Debts	1,000	
Discount allowed	1,000	
Printing and Stationery	1,000	
Office electricity	1,000	
Office cleaning charges	1,000	
	<b>4,04,000</b>	<b>4,04,000</b>

(P.T.O)

## FYBCOM-I-ATKT-FEB/MAR-2023-AFM

Additional Information:

- 1) Closing stock were RM 10,000, WIP 10,000, FG 10,000.
- 2) Goods worth RS. 20,000 were supplied to the customer on 30.03.2022 but the sales invoice not prepared up to 31.03.2022.
- 3) Outstanding office salary was ₹ 1,000.
- 4) Depreciation on furniture is provided @ 10% p.a.

**OR**

Q.4

A firm has two departments 'A' and 'B'. From the following figures, prepare Departmental Trading, Profit & Loss Account, General Profit & Loss account for year ended 31<sup>st</sup> March 2022 and a Balance Sheet as on that date

[20]

Debit	Rs.	Credit	Cr.
Opening Stock:		Transfer to 'A'	10,000
'A'	30,000	Sales:	
'B'	40,000	'A'	2,00,000
Carriage Inwards	6,000	'B'	1,20,000
Carriage Outwards	10,000	Creditors	30,000
Advertising	20,000	Capital	60,000
Salaries:		Loan	60,000
'A'	12,000		
'B'	14,000		
General Expenses	24,000		
Rent and Rates	18,000		
Lighting	1,800		
Furniture	30,000		
Debtors	40,000		
Bad Debts	3,200		
Purchases:			
'A'	1,20,000		
'B'	80,000		
Bank Balance	13,000		
Bank Interest	8,000		
Transfer from 'B'	10,000		
	<b>4,80,000</b>		<b>4,80,000</b>

Area occupied by the two departments is in the ratio 2:1.

General expenses are to be divided in the ratio 5: 3.

The closing stocks were: 'A' Rs.28,000 and 'B' Rs. 30,000.

Depreciate Furniture @10% and to be allocated in the ratio of space occupied between the departments.

Distribute Bank Interest on sales basis.

- Q.5 A) Distinguish between Capital expenditure and Revenue expenditure [10]  
 B) Explain in details the need of Opening stock reserve and Closing stock reserve while preparing Departmental Final Accounts and method of calculating the same. [10]

**OR**

Q.5 **Write short notes on: (ANY FOUR)**

[20]

- A) Accounting standard 2
- B) Transactions excluded from Accounting Standard 9
- C) Weighted Average method of inventory valuation
- D) Purchase and Sales related expenses
- E) Manufacturing Account
- F) Inter-departmental transfer of goods

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- Note :
- 1) **ALL** questions are **COMPULSORY**.
  - 2) All questions have internal choice.
  - 3) Use of simple calculator is allowed.
  - 4) Draw neat diagrams wherever necessary.

- Q.1 A) **Select the best answer from the given options and rewrite the statement:(ANY TEN)** [10]
- i) A \_\_\_\_\_ is Something whose magnitude can change.
 

A) Supply	B) Demand
C) Variable	D) Business economics
  
  - ii) Total Revenue =
 

A) $(P) \times (Q)$	B) $\frac{\Delta TR}{\Delta Q}$
C) $\frac{\Delta TC}{\Delta Q}$	D) $\frac{TR}{Q}$
  
  - iii) The market price is determined by the market demand and \_\_\_\_\_.
 

A) Aggregate supply	B) Market supply
C) Aggregate consumption	D) Estimated supply
  
  - iv) Which of the following is a case of linear demand function?
 

A) $Q_d = f(P_x)$	B) $Q_d = f(P_x, P_y)$
C) $Q_d = a + bP_x + L$	D) $Q_d = 10 - 2P$
  
  - v) If elasticity of demand = 1, the marginal revenue is \_\_\_\_\_.
 

A) Zero	B) $\infty$
C) 8	D) - 8
  
  - vi) Trend refers to: \_\_\_\_\_.
 

A) Short – term variation	B) Perfection
C) Regression	D) Long term movement of data
  
  - vii) If there is zero substitutability between capital and labour the ISO – Quant is \_\_\_\_\_.
 

A) Straight line	B) K Shaped
C) L Shaped	D) U Shaped
  
  - viii) The Slope of ISO cost line =
 

A) $\frac{P_x}{P_y}$	B) $\frac{P_K}{P_L}$
C) $\frac{\Delta k}{\Delta L}$	D) $\frac{\Delta TC}{\Delta Q}$
  
  - ix) The Slope of total cost curve equals \_\_\_\_\_.
 

A) AC	B) MR
C) MC	D) AR
  
  - x) Break – Even Analysis is also known as \_\_\_\_\_.
 

A) Break even cost	B) Cost Volume Profit Analysis
C) Production analysis	D) Cost – Revenue Analysis

## FYBCOM-I-ATKT-FEB/MAR-2023-BUS.ECO-I

- xi) MRTS stands for \_\_\_\_\_.
- A) Marginal rate of transport substitution      B) Marginal ratio of Technical substitution
- C) Marginal cost of ratio of Technical substitution      D) Marginal rate of technical substitution
- xii) The cost of producing 4<sup>th</sup> Units is ₹ 80 and 5<sup>th</sup> Units is ₹ 120. The MC of Producing the 5<sup>th</sup> Unit is \_\_\_\_\_.
- A)  $\frac{5}{12}$       B)  $\frac{80}{120}$
- C) 40      D)  $\infty$

Q.1      B) **Write whether the following statements are TRUE or FALSE. (ANY TEN)**      [10]

- i)  $Q_d = f(P)$  is an equation.
- ii) The sum of quantity supplied of a good by all firms in the market is known as market demand.
- iii) Under monopoly market, Monopolist faces downward sloping demand curve.
- iv) The relationship between demand and its determinants is known as demand function.
- v) Kinked demand curve is observed in oligopoly market.
- vi) A linear demand function may be stated as  $Q_d = a + bP$ .
- vii) Demand forecasting will help to determine sales target.
- viii) The Ridge line are the locus of points of an ISO – Quant where the marginal product of factors are zero.
- ix) Labour economy is caused by division of labour.
- x) In the long run all costs are fixed.
- xi) The MC curve intersects AC curve at its minimum point from below.
- xii) Break Even Point is known as no profit no loss point.

Q.2      **Attempt A and B or C and D:**

- A) Explain the use of marginal analysis in decision making.      [07]
- B) Explain the following: i) Opportunity cost principle ii) Incremental and marginal Concepts      [08]

**OR**

- C) The demand function for a commodity is given as  $Q_d = 20 - 2P$  and its Supply function is given as  $Q_s = 2P$ . make a schedule of demand and Supply at prices ₹ 0/-, ₹ 5/-, ₹ 10/- and ₹ 15/-. Find the equilibrium price and Quantity demand.      [07]
- D) Discuss the Scope and importance of Business Economics.      [08]

Q.3      **Attempt A and B or C and D:**

- A) What are the determinants of demand?      [07]
- B) Find the income elasticity of demand, if a consumer income rises from ₹ 200/- to ₹ 400/-. The quantity purchased by him increases from 50 Units to 60 Units.      [08]

**OR**

- C) Explain the survey methods of demand forecasting.      [07]
- D) Estimate sales for the year 2024. (using OLS method)      [08]

Q.4      **Attempt A and B or C and D:**

- A) What is ISO – Quant? Explain the properties of ISO – Quants.      [07]
- B) Using an ISO – Quant map and ISO – Cost line explain the producer's equilibrium as the least cost combination.      [08]

**OR**

- C) Discuss the law of returns to Scale with the help of ISO – Quants. [07]  
 D) Discuss the Economies of Scale. [08]

Q.5

**Attempt A and B or C and D:**

- A) Distinguish between: [07]  
 i) Business Cost and Accounting Cost.  
 ii) Implicit Cost and Explicit Cost.

- B) Calculate TC, AFC, AVC, AC and MC. [08]

Output (Q)	1	2	3	4	5	6
TVC	20	45	65	95	145	200
TFC	20	20	20	20	20	20

**OR**

- C) Discuss the Break – Even chart with the help of suitable diagrams. [07]  
 D) For a hypothetical firm, If price of product is ₹ 8/-, TFC is ₹ 500/-, and AVC is ₹ 3/-, then [08]  
 i) Calculate break – even output for this firm.  
 ii) At the original TFC and AVC how does break – even quantity change if price rises to ₹ 13/-?

Q.6

- A) Discuss the nature of demand curves under different markets. [10]  
 B) Derive the LAC Curve using the short run cost curve of a firm. [10]

**OR**

Q.6

**Write short notes on: (ANY FOUR)**

- A) Functions and Equations [20]  
 B) Production function  
 C) Economic region  
 D) Social and Private Cost  
 E) Economies of scope  
 F) Learning curve

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## FYBCOM-I-ATKT-FEB/MAR-2023-B.C.

Time : 03 hrs

Max. Marks. 100

- Note : 1) **ALL** questions are **COMPULSORY**.  
2) Figures to the right indicate full marks.

- Q.1 A) **Explain the terms in two to three sentences: (ANY FIVE)** [10]  
1) Encoding  
2) E-Mail  
3) Proximics  
4) Jargon  
5) Slanting  
6) Listening  
7) Enclosure  
8) Resume

- Q.1 B) **State whether the following statements are TRUE or FALSE:** [05]  
1) Looking confused is a kind of negative feedback.  
2) Tweets are sent through Facebook.  
3) Distortion of message takes place when lines of communication are short.  
4) The ethical stance is the extent to which an organization will exceed its minimum obligation to stakeholders.  
5) Summarizing and evaluation helps the listener to check whether she/he has understood the ideas expressed by the speaker.

- Q.1 C) **Attempt the following multiple choice questions:** [05]  
1) When communication takes place between two individuals, it is referred to as \_\_\_\_\_ communication.  
A) Group B) Mass  
C) Interpersonal D) Individual  
2) Date in a letter has \_\_\_\_\_.  
A) Sentimental value B) Legal value  
C) No significance D) No mandate  
3) The traditional resume is called the \_\_\_\_\_ resume.  
A) Chronological B) Functional  
C) Combined D) Official  
4) Lack of good speaking skills causes \_\_\_\_\_.  
A) Good writing skills B) Psychological barriers  
C) Cross – cultural barriers D) Communication gap  
5) \_\_\_\_\_ scans your incoming e-mails.  
A) Hardware B) Viras protection software  
C) Computer D) Webcam

- Q.2 **Write short notes on: (ANY FOUR)** [20]  
1) The importance of Feedback  
2) Communication Process  
3) Advantages and disadvantages of Facebook  
4) Blogs (P.T.O)



## FYBCOM-I-ATKT-FEB/MAR-2023-B.C.

- 5) Diagonal Communication
- 6) Advantages and disadvantages of Written Communication

- Q.3 **Answer ANY TWO of the following:** [20]
- A) Explain business ethics. Explain how business ethics is important in the entertainment media and social media.
  - B) Discuss in detail the various psychological barriers to communication.
  - C) What are the obstacles to effective listening? How can we overcome them?
- Q.4 **Draft a reply in response to the following advertisement:** [10]
- “Wanted accounts executives for a reputed company in Mumbai. Candidates should be commerce graduates, familiar with tally and the use of computers. Interested candidates may send their application with resume within ten days to P.O. Box 1056, The Indian Express, Nariman Point, Mumbai – 400 021.”
- Q.5 **Draft the following letters: (ANY FOUR)** [20]
- A) You wish to take admission for a Master’s program in Business Economics at Toronto University, Canada. Draft the Statement of Purpose.
  - B) Draft a letter of recommendation for your HR executive who wishes to apply for the post of HR manager with Reliance Industries Ltd.
  - C) You have received an offer for the position of Sales Manager in a private company. Draft your letter of acceptance of the job offer.
  - D) You have to relocate to New Delhi. Write a letter of resignation to your present employers M/S Shah & Sons.
  - E) Mr. Prakash of your sales department has worked hard and proved his skills in sales by contributing for the increase in the profit of your company. Write a letter of appreciation to him.
- Q.6 A) **Write a paragraph in about 150 words: [ANY ONE]** [05]
- i) Environmental Challenges of the 21<sup>st</sup> century
  - ii) Your most memorable vacation
- B) **Read the following situation carefully and answer the questions given below:**
- Manager Prakash Kumar believed that managers can only communicate with their clerks by using a “Memo” paper. The clerks were used to receiving ‘memos’ for coming late, for not doing their work properly, or for taking leave without permission. Information given by Prakash Kumar on Memo paper was never properly received by the clerks because of the unpleasant association that a “memo” had in their minds. Typist Somnath was not at all happy to receive a “memo” of congratulations from Prakash Kumar when his first child was born.
- i) Identify and explain the problem in the given situation. [03]
  - ii) Discuss the means to overcome the problem. [02]

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# FYBCOM-I-ATKT-FEB/MAR-2023-COMMERCE-I

Time : 03 hrs

Max. Marks. 100

- Note : 1) **ALL** questions are **COMPULSORY**.  
2) Figures to the right indicate full marks.

- Q.1 A) **Fill in the blanks: (ANY TEN)** [10]
- 1) Agriculture is an example of \_\_\_\_\_ industries.  
A) Primary                      B) Genetic  
C) Extractive                      D) Service
  - 2) \_\_\_\_\_ Is the most important economic objective of a business unit.  
A) Innovation                      B) Profit  
C) Goodwill                      D) Expansion
  - 3) \_\_\_\_\_ refers to reduction of government control over business sector.  
A) Unitization                      B) Globalisation  
C) Liberalisation                      D) Privatisation
  - 4) Internal environment of business includes \_\_\_\_\_.  
A) Customers                      B) Suppliers  
C) Dealers                      D) Employees
  - 5) \_\_\_\_\_ Is one of the member country of SAARC.  
A) Japan                      B) Zambia  
C) Sri Lanka                      D) Brazil
  - 6) AoA refers to \_\_\_\_\_.  
A) Agreement on Artistry                      B) Agreement on Agriculture  
C) Agreement on Amalgamation                      D) Agreement on Association
  - 7) \_\_\_\_\_ Is required for tax deduction at source.  
A) TAN                      B) TIN  
C) DAN                      D) DIN
  - 8) At present licensing is required only for \_\_\_\_\_ industries in India.  
A) Seven                      B) Three  
C) Nine                      D) Six
  - 9) Proximity to market of a plant is required in case of \_\_\_\_\_ Products.  
A) Perishable                      B) Durable  
C) Luxury                      D) Light Weight
  - 10) An entrepreneur is the one who takes \_\_\_\_\_ Decisions.  
A) Delayed                      B) Reactive  
C) Proactive                      D) Confusing
  - 11) \_\_\_\_\_ was a famous social entrepreneur.  
A) Richard Branson                      B) Steve Jobs  
C) Florence Nightingale                      D) Andrew Smith

(P.T.O)



Seat No. \_\_\_\_\_

\_\_\_\_\_  
Supervisor's Signature

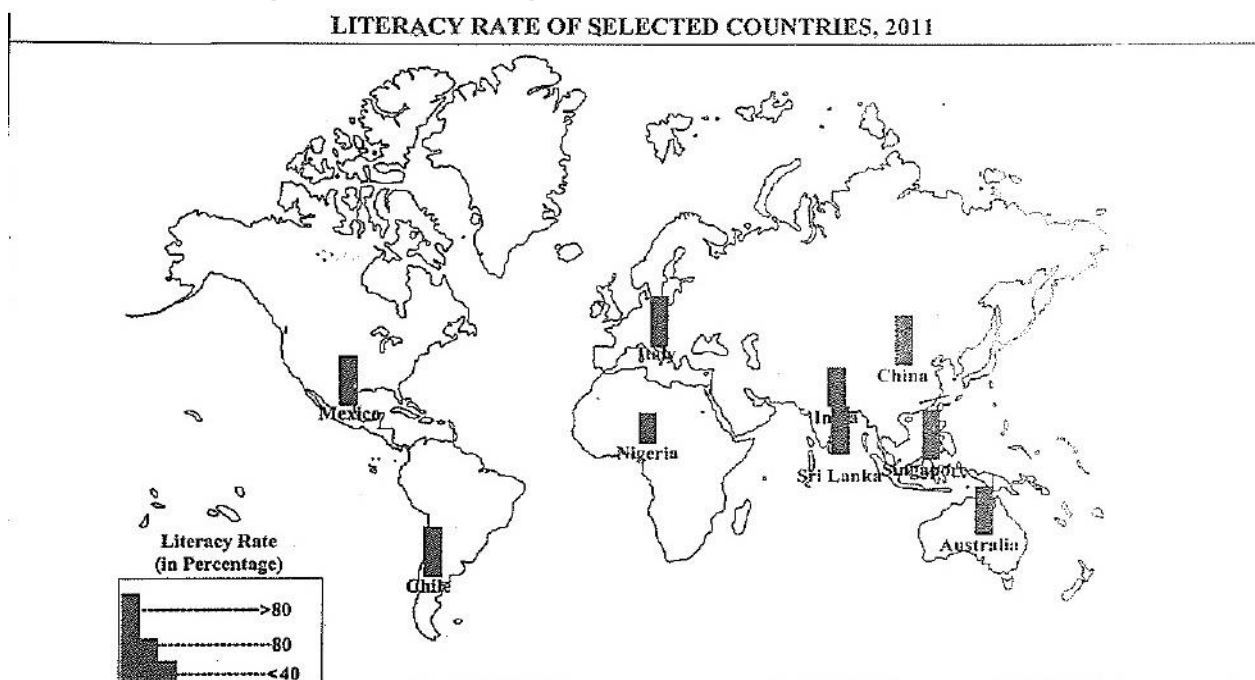
**World Map**





- Note: 1) **ALL** questions are **COMPULSORY**.  
 2) Figures to the right indicate full marks.  
 3) Draw maps wherever necessary.  
 4) Map stencils are permitted.  
 5) Attach the world map to the main answersheet.

Q.1 A) **Read the world map and answer the questions:**



- 1) What is the theme of the map? [01]
  - 2) Name the cartographic technique used to represent the data. [01]
  - 3) What is the literacy rate of Sri Lanka and Italy. [02]
  - 4) What is the literacy rate of Nigeria and Chile. [02]
  - 5) What is the literacy rate of two densely populated countries. [02]
  - 6) What is the literacy rate in Mexico and Australia. [02]
- B) On the outline map of the world mark and name the following: [10]
- 1) A sea experiencing problems of oil spills.
  - 2) An earthquake prone country.
  - 3) A biodiversity hotspot.
  - 4) A mountain Range in Asia.
  - 5) A tropical rain forest.
  - 6) An island country.
  - 7) The deepest ocean in the world.
  - 8) A country experiencing acid rain.
  - 9) A river in Australia.
  - 10) The busiest canal in the world.

Q.2 **Answer ANY TWO from the following:** [20]

- A) Explain the component of the cultural environment.
- B) Discuss how relief and lithology influence the development of commercial activities.
- C) Discuss the biotic components of the environment.

Q.3 **Answer ANY TWO from the following:** [20]

- A) Explain the problems related to water.
- B) Describe methods of energy conservation.
- C) Discuss the significance of forest resources.

(P.T.O)

- Q.4 **Answer ANY TWO from the following:** [20]
- A) Briefly explain the Demographic transition model.
  - B) What are the different causes of population explosion in India?
  - C) Why is it necessary to calculate The world Happiness Index?

- Q.5 **Answer ANY TWO from the following:** [20]
- A) State the problems arising due to migration in urban areas.
  - B) Discuss the concept and characteristics of Sustainable cities.
  - C) Define the term migration. What are the types of migration?

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## FYBCOM-I-ATKT-FEB/MAR-2023-F.C.

Time : 02 hrs 30 min

Max. Marks. 75

- Note : 1) **ALL** questions are **COMPULSORY**.  
2) Figures to the right indicate full marks.

- Q.1 A) **Choose the right alternative: (ANY EIGHT)** [08]
- 1) \_\_\_\_\_ is the first citizen of the city.  
A) President                      B) Governor  
C) Chief Minister                D) Mayor
  - 2) The holy book of Zoroastrians is \_\_\_\_\_.  
A) Bhagvad Gita                  B) Bible  
C) Guru Granth Sahib          D) Zend Avesta
  - 3) \_\_\_\_\_ has the final power to interpret the constitution.  
A) Executive                      B) Legislature  
C) Judiciary                        D) Citizens
  - 4) Dowry harassment is a type of \_\_\_\_\_ violence against women.  
A) Social                            B) Domestic  
C) Criminal                         D) Financial
  - 5) In India \_\_\_\_\_ state has the highest literacy rate.  
A) Kerala                            B) Haryana  
C) Uttar Pradesh                 D) Tamil Nadu
  - 6) \_\_\_\_\_ arises out of religious fundamentalism.  
A) Regionalism                    B) Communalism  
C) Casteism                        D) Linguism
  - 7) The urban areas in India are looked after by the \_\_\_\_\_.  
A) Central Government        B) State Government  
C) Municipalities                D) Panchayat Raj
  - 8) The constitution of India confers \_\_\_\_\_ citizenship.  
A) Single                            B) Dual  
C) Multiple                        D) No
  - 9) Indian society is \_\_\_\_\_ in nature.  
A) Pluralistic                      B) Urban  
C) Rural                              D) Tribal
  - 10) The word \_\_\_\_\_ means equal respect for all religions.  
A) Secular                         B) Sovereign  
C) Socialist                        D) Democratic
- B) **State whether the following statements are TRUE or FALSE: (ANY SEVEN)** [07]
- 1) Kerala is the only state in India where females out number males.
  - 2) Rape and molestation are types of criminal violence against women.
  - 3) Council members of a municipal council are elected by state government. **(P.T.O)**

## FYBCOM-I-ATKT-FEB/MAR-2023-F.C.

- 4) Indian constitution is one of the smallest constitution in the world.
- 5) India has adopted presidential democracy.
- 6) Proper law and order can combat inequalities arising due to caste system.
- 7) Literacy rate is higher in rural areas as compared to urban areas.
- 8) The election commission of India has the power to de-recognize political parties when found fraudulent.
- 9) Regionalism promotes social progress and modernization.
- 10) The Political parties which do not get majority, play the role of opposition parties.

Q.2 A) Explain the regional variations in India according to its rural and Urban characteristics [15]

**OR**

B) Define violence. What are the types and causes of violence against women? [15]

Q.3 A) Define communalism. Explain the factors responsible for growth of communalism. [15]

**OR**

B) Explain inequalities generated due to caste system in India and the measures to combat these inequalities. [15]

Q.4 A) Elaborate the basic features of the Indian Constitution. [15]

**OR**

B) Define Fundamental Duties. Explain the fundamental duties of citizens of India. [15]

Q.5 A) Explain political party system in India and elaborate its characteristics. [15]

**OR**

B) **Write short notes on ANY THREE of the following:** [15]

- 1) Characteristics of Indian Society
- 2) Declining gender ratio
- 3) Regionalism
- 4) Tolerance
- 5) Women in Politics

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# FYBCOM-I-ATKT-FEB/MAR-2023-MATHS & STATS

Time : 03 hrs

Max. Marks. 100

- Note: 1) **ALL** questions are **COMPULSORY**.  
2) Figures to the right indicate full marks.  
3) Use of simple calculator is allowed.  
4) Graph Papers will be provided on request.  
5) All questions carry equal marks.

## SECTION-I

Q.1 **Attempt ANY FOUR of the following:**

[20]

- A) Mr. X purchased 250 shares of face value Rs. 10 each of a company at market price of Rs. 80 each and brokerage paid was 2%. After 3 months he received a dividend of 20%. Find total purchase price and the amount of dividend received.
- B) Mr. A invested Rs. 10,000 on 1<sup>st</sup> of every month for 4 months in SIP of a mutual fund, with N.A.V. s as 35.5, 40.2, 52.8 and 45.2 respectively. Find the average price using the Rupee – Cost – Averaging Method and compare it with A. M. of prices. The entry load was 2% throughout this period.
- C) Atul received Rs. 1,83,264 after selling 800 shares of a Company at M.P. of Rs. 230 each. Find the brokerage and brokerage percentage.
- D) If the NAV of a MF is Rs 99 at the end of the year with 10% increase during the year. Find the NAV at the beginning of the year.
- E) A person bought 5000 units of a M. F. for Rs. 120000. If entry load was 2% then find N.A.V on the date of purchase.

Q.2 **Attempt ANY FOUR of the following:**

[20]

- A) Solve by graphical method:  
Maximize  $Z = 1000x + 150y$  Subject to  $x + y \leq 60$ ,  $2500x + 500y \leq 50000$  and  $x \geq 0$ ,  $y \geq 0$
- B) A diet of growing child must contain at least 4000 units of vitamins, 50 units of minerals & 1400 calories. Two types of foods A & B are available with cost Rs 70 & Rs 80 per Kg. Each Kg. of food A contains 200 units of vitamins, 1 mineral & 40 calories. Each Kg. of food B contains 100 units of vitamins, 2 minerals & 40 calories. Formulate the Linear Programming Problem to minimize cost.
- C) How many different numbers of three digits can be formed using digits 1, 4, 6, 7, 8, 9 if (a) no digit is repeated. (b) digits are repeated.
- D) If  ${}^n P_5 = 2 {}^n P_3$  find the value of n.
- E) In a class of 120 students there are 70 boys and 50 girls. In
- how many ways can we select 2 class representatives from class?
  - how many ways can we select one boy and one girl as class representatives?

## Section-II

Q.3 **Attempt ANY FOUR of the following:**

[20]

A) Calculate arithmetic mean and median for:

marks	0-10	10-20	20-30	30-40	40-50	50-60
No of students	7	8	12	16	8	9

B) Write a short note on Measures of Dispersions.

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C) Draw histogram and find mode for the following data:

Class interval	60-75	75-90	90-105	105-120	120-135	135-150
f:	3	4	5	7	9	6

D) Calculate M.D. from mode and coefficient of M.D. for:

X	10	20	30	40	50	60
f	7	8	12	10	7	6

E) The details of wage bills of two companies is as follows:

Company	A	B
Number	400	600
Average daily wages:	Rs. 650	Rs. 550
Variance	900	400

- I) Which company has lower wage bill?
- II) Which company has more consistency in wages?

Q.4 **Attempt ANY FOUR of the following:**

[20]

A) Define following terms with the help of illustration.

(i) Mutually exclusive events (ii) Exhaustive events

B) A random variable X has probability distribution as follows:

x	0	1	2	3	4
P(x)	0.1	0.2	0.3	0.25	0.15

Hence find (i)  $E(X)$  (ii)  $V(X)$

C) Two cards are drawn randomly from a pack of 52 playing cards. Hence, find probability of getting (i) one spade card and one diamond card (ii) both picture cards.

D) A lottery ticket is selected from a bunch of 25 lottery tickets numbered 1 to 25. Find the probability that the number on ticket is divisible by 3 or 4.

E) In a group of 100 persons, 60 like classical music, 65 like light music and 25 like both. Find the probability that a person selected at random from this group like (i) both types of music (ii) only classical music.

Q.5 **Attempt ANY FOUR of the following:**

[20]

A) For the following pay-off table choose best decision using EMV criterion.

	S1	S2	S3	S4
A1	40	60	80	60
A2	60	120	80	30
A3	60	70	50	40
Probability	0.2	0.3	0.3	0.2

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- B) For the following pay-off table choose best decision using (i) Maximin criterion (ii) Laplace criterion.

	S1	S2	S3	S4
A1	350	500	1000	400
A2	550	1100	60	250
A3	700	950	1300	1100

- C) For the following pay-off table choose best decision using Minimax regret criterion.

	S1	S2	S3
A1	50	100	140
A2	300	150	50
A3	10	110	350

- D) A certain product can be sold at Rs. 60 per Kg. whose cost price is Rs. 30 per Kg. It's demand function is as follows:

Demand in Kg :	10	20	30
Probability:	0.3	0.5	0.2

Any unsold product is worthless on the next day. Choose best decision using EMV.

- E) Write a short note on decision tree.

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