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BBABMC 211/BBMBMC 211

**Credit Based Third Semester B.B.A./B.B.M. Degree
Examination, Nov./Dec. 2018
(2012 Scheme)
INCOME TAX**

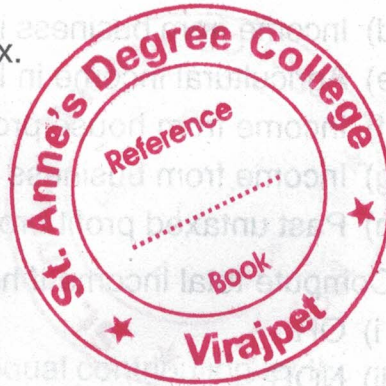
Time : 3 Hours

Max. Marks : 120

Instruction : Show the working notes wherever necessary.

SECTION – A (2 marks each)

1. Answer **any ten** in **one or two** sentences **each** : (2×10=20)
- What is assessment year ?
 - Mention the twin objectives of levying income tax.
 - What is grossing up of interest ?
 - Give examples of partly agricultural income.
 - What is fair rent ?
 - What is long term capital gain ?
 - State the exemptible limit of commuted pension.
 - What is tax free income ?
 - Who is specified employee ?
 - List two characteristics of income.
 - What is vocation ?
 - Give the meaning of gratuity.



SECTION – B (8 marks each)

Answer **any five** : (8×5=40)

- Explain the deductions permissible while computing the income from house property.
- Explain the provisions pertaining to death cum retirement gratuity.

P.T.O.



4. Ms. Vani an Indian citizen left India for the first time on 28th October 2010 to London. She came back to India in November 2012 and stayed here in India till August 2014, when she left to London. She again visited India on 4th January 2018. Compute her residential status for the A.Y. 2018-19.

5. During the P.Y. 2017-18, Mr. Naveen received the following :

Basic – Rs. 15,000 p.m.

D. A. – Rs. 500 p.m. (considered for P.F.)

Commission @ 1% on sales turnover of Rs. 10 lakh

HRA Rs. 3,000 p.m.

Rent actually paid for the house in Mysore is Rs. 4,000 p.m.

Compute taxable HRA.

6. Mr. Goutham has following income for the P.Y.

a) Income from business in Kundapur Rs. 80,000

b) Income from salary in Mangalore Rs. 2,00,000

c) Interest on Bank FD in Canara Bank Rs. 8,000

d) Income from business in Singapore controlled from Kundapur Rs. 1,50,000

e) Agricultural income in Hassan Rs. 50,000

f) Income from house property in Dubai Rs. 1,00,000

g) Income from business in USA Rs. 1,00,000 (½ received in India)

h) Past untaxed profit brought to India in the P.Y. Rs. 25,000

Compute total income if he is :

i) OR

ii) NOR

iii) NR

7. Mr. Shreyas sold the residential house for Rs. 25,00,000 in November 2017. This house was purchased in 2002-03 for Rs. 5,00,000. He has spent Rs. 40,000 in 2005-06 for additions to the house. The selling expenses amounted to Rs. 20,000. He immediately purchased another house in July 2018 for Rs. 7,50,000 and deposited Rs. 1,50,000 in CGAS. Compute taxable long term capital gain.

CII for 2002-03 105

2005-06 117

2017-18 272



8. Mrs. Reena furnishes the following particulars of her income for the P.Y. 2017-18.
- a) 10%, 20000 debentures of a company
 - b) 8%, 30000 taxfree Central Govt. securities
 - c) 10%, 15000 Karnataka Govt. bond
 - d) Rs. 20,000 dividend from UTI
 - e) Winning from horse race (Net) Rs. 7,000
 - f) Winning from lottery Rs. 35,000 (Net)
 - g) Directors fees Rs. 10,000
 - h) Income from subletting house Rs. 12,000
- Compute income from other sources.

SECTION – C (20 marks each)

Answer any three :

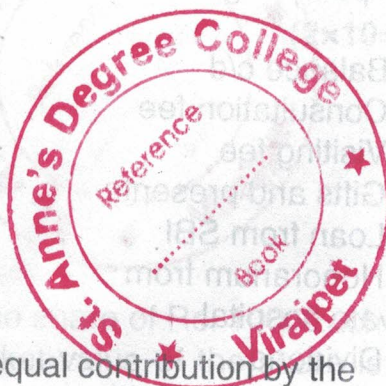
(20×3=60)

9. From the following particulars of Mr. Karthik, compute his salary income and deductions u/s 80 C.

- i) Basic Rs. 20,000 p.m.
- ii) D. A. Rs. 1,000 p.m. (enters into PF)
- iii) Bonus Rs. 10,000
- iv) Entertainment allowance Rs. 200 p.m.
- v) Conveyance allowance Rs. 1,800 p.m.
- vi) Hostel allowance Rs. 400 p.m. per child
- vii) He contributes 13% of his salary to RPF with equal contribution by the employer.

Interest on RPF at 10.5% amounted to 10,500.

- viii) He is provided with rent free furnished house owned by the company. The cost of furniture is Rs. 1,00,000 (city population is above 25 lakh)
 - ix) The company provided the services of sweeper and cook who are paid Rs. 500 p.m. and Rs. 700 p.m. respectively.
 - x) During the P.Y. he made the following payments
- LIC premium Rs. 25,000
 - PPF deposit Rs. 20,000
 - Professional tax Rs. 2,400.



10. Compute income from house property from the following particulars :

Particular	I	II	III	IV
Purpose	Let out	Let out	Self occupied	Let out
Municipal value	38,000	43,000	45,000	50,000
FRV	35,000	45,000	55,000	45,000
Rent received	40,000	50,000	—	48,000
Standard rent	36,000	47,000	60,000	55,000
Interest on housing loan	6,000	8,000	4,000	—
Municipal tax paid	4,000	5,000	—	—
Municipal tax due	—	—	3,000	3,500
Vacancy	—	2mths.	—	1mth.
Repairs	1,000	—	—	2,000

11. Dr. Saketh is a medical practitioner who maintains cash system of accounting. Compute his gross total income for the A.Y. 2018-19 from the following particulars.

	Rs.		Rs.
To Balance c/d	44,000	By Rent	1,44,000
To Consultation fee	4,00,000	By Electricity	40,000
To Visiting fee	4,00,000	By Purchase of medicine	2,80,000
To Gifts and presents	50,000	By Professional books	50,000
To Loan from SBI	1,00,000	By Surgical equipment	3,80,000
To Honorarium from private hospital	1,50,000	By Salary to staff	2,40,000
To Dividend	1,52,000	By LIC premium	1,26,000
To Rent from subletting	10,000	By Interest on Loan	40,000
To Sale of medicine	2,44,000	By Personal expenses	1,50,000
	15,50,000	By Balance c/d	1,00,000
			15,50,000

Additional Information :

- a) Loan is taken for daughter's marriage
- b) O/S salary payable to staff is Rs. 30,000
- c) Depreciation on books is at 40% surgical equipments at 15%.

12. Explain the provision related to different types of provident fund.

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BBABMC 212/BBMBMC 212

**Credit Based Third Semester B.B.A./B.B.M. Degree
Examination, Nov./Dec. 2018
(2012 Scheme)**

CORPORATE ACCOUNTING – I

Time : 3 Hours

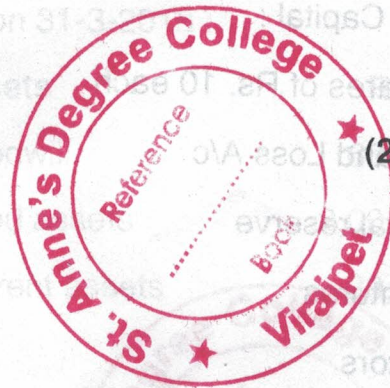
Max. Marks : 120

Instruction : Provide working notes *wherever* necessary.

SECTION – A (2 Marks Each)

Answer any ten questions :

- a) What is a share ?
- b) Give the meaning of 'Underwriting'.
- c) What is calls-in-arrears ?
- d) What are debentures ?
- e) X Ltd. offers to its shareholders the right to buy one share of Rs. 100. Each at Rs. 120 for every three shares held. The market value of the share is Rs. 180. Calculate the value of right.
- f) State any two advantages of book building.
- g) How do you treat pre-incorporation profit in the books of accounts ?
- h) State any two differences between 'Equity Share' and 'Preference Share'.
- i) How fair value of share is calculated ?
- j) What are marked applications ?
- k) Mention the different methods of valuing goodwill.
- l) How do you deal with the following items in final accounts of Joint Stock Companies ?
 - i) Interest on sinking fund investment
 - ii) Loans to employees.



P.T.O.



SECTION – B
(8 Marks Each)

Answer any five :

(8×5=40)

2. State the provisions for the redemption of preference shares.
3. Explain the various methods of redemption of debentures.
4. Following is the Balance Sheet of Hard Ltd. as on 31-3-2018 :

Liabilities	Rs.	Assets	Rs.
Share Capital :		Buildings	80,000
Shares of Rs. 10 each	2,00,000	Plant	40,000
Profit and Loss A/c	30,000	Investments	1,00,000
General reserve	19,000	Debtors	40,000
Debentures	30,000	Stock	30,000
Creditors	15,000	Bank	14,000
Bills payable	10,000		
	3,04,000		3,04,000

Fixed assets are valued at Rs. 1,40,000,

Market value of investments Rs. 1,02,000.

Find the intrinsic value of a share.

5. The Balance Sheet of Bright Ltd. as on 31-12-2017 was as follows :

Liabilities	Rs.	Assets	Rs.
15,000 Equity shares of		Goodwill	30,000
Rs. 10 each	1,50,000	Fixed assets	1,80,000
General Reserve	90,000	Current assets	1,00,000



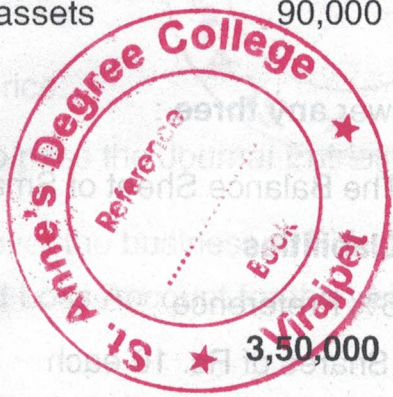
Provision for tax	10,000	Preliminary expenses	15,000
8% Debentures	50,000		
Creditors	25,000		
	3,25,000		3,25,000

The average profit of the company is Rs. 30,000. After interest on debentures and taxes. The market value of machinery included in fixed assets is Rs. 5,000 more. Expected rate of return is 10%.

Compute the value of Goodwill of the company at five times in super profit.

6. Following is the Balance Sheet of Best Ltd. as on 31-3-2018 :

Liabilities	Rs.	Assets	Rs.
Share Capital :		Goodwill	60,000
20,000 Equity		Fixed assets	2,00,000
shares of Rs. 10 each	2,00,000	Current assets	90,000
Reserve fund	50,000		
Profit and Loss A/c	20,000		
9% Debentures	60,000		
Creditors	20,000		
	3,50,000		3,50,000



On the above date company decided to capitalise its Reserve/Profit by declaring bonus to be utilised as follows :

- i) To issue 3 fully paid bonus shares of Rs. 10 each for every 10 shares held.
- ii) For the above purpose company decided to utilise the entire amount of Reserve fund and the balance from Profit and Loss Account.

Pass necessary Journal Entries and prepare the Revised Balance Sheet.



7. Sun Ltd. issued 40,000 shares of Rs. 10 each, 80% of the issue was underwritten by two underwriters as follows :

Agents – 24,000 shares

Brokers – 8,000 shares.

Applications for 30,000 shares were received out of which applications marked were as follows ;

Agents – 16,000 shares

Brokers – 10,000 shares

Determine the liability of each underwriter.

8. Ahuja Ltd. has 1,00,000 equity shares of Rs. 10 each and 80,000, 10% preference shares of Rs. 10 each. The company transfers 10% of divisible profits to reserve every year. The expected profit before tax is Rs. 4,00,000. The rate of tax is 30%. Normal rate of return is 12%. Find out the market value of each equity share.

SECTION – C
(20 Marks Each)

Answer any three :

(20×3=60)

9. The Balance Sheet of Smart Ltd. as on 31-3-2018 was as follows :

Liabilities	Rs.	Assets	Rs.
6% Preference		Land and building	2,30,000
Shares of Rs. 10 each	1,50,000	Plant	90,000
Equity shares of		Furniture	60,000
Rs. 10 each	2,70,000	Investments	84,000
Securities premium	30,000	Stock	90,000
General Reserve	60,000	Debtors	45,000
Profit and Loss A/c	75,000	Bank	70,000
Current liabilities	84,000		
	6,69,000		6,69,000



The company decided to redeem its preference shares at a premium of 10% on the following terms :

- 1) A fresh issue of equity shares of Rs. 10 each to the extent required was made at 20% premium.
- 2) All the investments were sold at Rs. 81,000.
- 3) The directors wish that Profit and Loss Account be fully utilised and Rs. 10,000 be left in general reserve.

Pass Journal Entries. Show the Balance Sheet after redemption.

10. Prosperous Ltd. issued 2,00,000 shares of Rs. 10 each at Rs. 13 per share. Sixty percent of the issue was underwritten by Mr. Ashok and Mr. Bhaskar in the ratio of 3 : 2. Applications for 1,60,000 shares were received out of which the marked applications were

Mr. Ashok – 50,000 shares

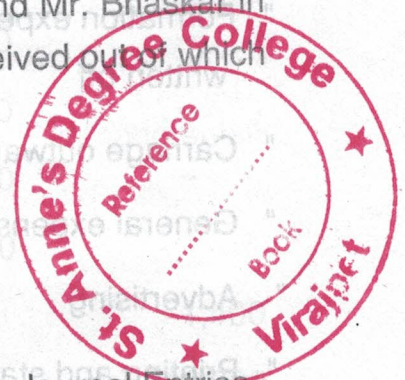
Mr. Bhaskar – 24,000 shares

The underwriting commission is 4% on the issue price.

Determine the liability of each underwriter and also pass the Journal Entries.

11. Akbar Ltd. was incorporated on 31-7-2017 taking over the business of Birbala as from 1-4-2017. The following was the Profit and Loss Account for the year ended 31-3-2018 :

Liabilities	Rs.	Assets	Rs.
To Salaries	24,000	By Gross Profit B/d	1,68,000
" Rent and taxes	9,600		
" Director's fees	6,000		
" Salesmen commission	4,800		
" Office expenses	24,000		



" Bad debts	1,000	
" Discount	7,200	
" Audit fees	1,200	
" Depreciation	3,600	
" Debenture int.	2,000	
" Interest on purchase consideration upto 30 th Nov. 2017	9,000	
" Formation expenses written off	10,000	
" Carriage outward	2,400	
" General expenses	4,200	
" Advertising	3,600	
" Printing and stationery	6,000	
" Net profit	49,400	
	1,68,000	1,68,000

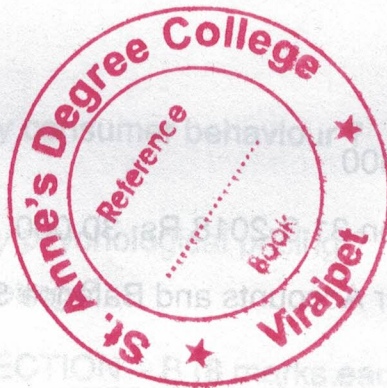
Additional Information :

- 1) The total sales for the year Rs. 4,80,000.
 - 2) It is ascertained that sales for April were one and half times of the average sales, which for July, November and March were only half the average sales and those for June twice the average.
 - 3) Out of bad debts Rs. 400 relate to debts created prior to incorporation.
- Apportion the Year's profit between pre and post incorporation periods.



12. National Company Ltd. was registered with a normal capital of Rs. 5,00,000 in Equity shares of Rs. 10 each. The following is the Trial Balance as on 31-3-2018 :

Particulars	Dr (Rs.)	Cr (Rs.)
Equity share capital	-	1,00,000
Calls in arrears	6,400	-
Land	10,000	-
Building	25,000	-
Machinery	15,000	-
Furniture	3,200	-
Carriage	2,300	-
Wages	21,400	-
Salaries	4,600	-
Bad debts reserve	-	1,400
Sales	-	80,000
Return inwards	1,700	-
Bank charges	100	-
Coal, gas and water	700	-
Rent and rates	800	-
Purchases	50,000	-
Purchases returns	-	3,400
Bills receivable	1,200	-
General expenses	1,900	-
Debtors and Creditors	42,800	13,200
Stock	25,000	-





Insurance	400	-
Cash at bank	13,000	-
Cash in hand	2,500	-
Securities premium	-	6,000
General reserve	-	24,000
	2,28,000	2,28,000

Adjustments :

1) Charge depreciation on buildings at 2% on machinery at 10%, and furniture at 10%.

2) Make a reserve of 5% on debtors for bad debts.

3) Insurance prepaid Rs. 120.

4) Provide for the following outstanding liabilities :

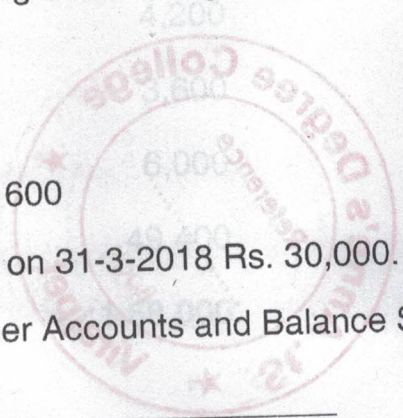
Wages – Rs. 3,000

Salaries – Rs. 2,000

Rent and rates – Rs. 600

5) The value of stock as on 31-3-2018 Rs. 30,000.

Prepare necessary Ledger Accounts and Balance Sheet.



1) The total sales for the year Rs. 4,50,000.

2) It is ascertained that sales for April were one and half times of the average sales, which for July, November and March were only half of the average sales and those for June twice the average.

3) Out of the total sales of Rs. 4,50,000, Rs. 1,00,000 were credit sales and the balance were cash sales.

Debtors and Creditors at the beginning of the year were Rs. 1,00,000 and Rs. 2,00,000 respectively.

Stock

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BBABMC 210/BBMBMC 210

Credit Based Third Semester B.B.A./B.B.M. Degree Examination,

November/December 2018

(2012 Scheme)

MARKETING MANAGEMENT

Time : 3 Hours

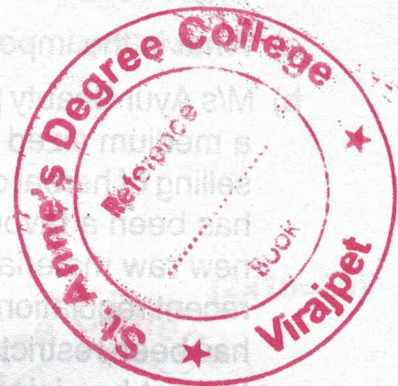
Max. Marks : 120

SECTION – A (2 marks each)

Answer any ten questions :

(2×10=20)

1. a) What do you mean by durable goods ?
- b) What do you mean by market segmentation ?
- c) What do you mean by advertising copy ?
- d) What do you mean by industrial goods ?
- e) What is product line ?
- f) Who is a wholesaler ?
- g) What is a product ?
- h) What is grading ?
- i) What do you mean by consumer behaviour ?
- j) What is trade mark ?
- k) What do you mean by psychological pricing ?
- l) What is service marketing ?



SECTION – B (8 marks each)

Answer any five questions :

(8×5=40)

2. Explain the nature of marketing.
3. What are the functions of packaging ?
4. What are the objectives of sales promotion ?
5. Explain the factors influencing pricing of a product.
6. What are the merits of labelling ?
7. What are the function of branding ?
8. What are the different types of consumer services ?

P.T.O.

**SECTION – C (20 marks each)**

Answer the following questions :

(20×3=60)

9. Explain the concepts of marketing.

OR

Explain the stages involved in the new product development.

10. What are the features of rural markets ? What is its significance ?

OR

Explain the importance of pricing. What are the different methods of pricing ?

11. Explain the different stages of product life cycle with suitable strategies.

OR

a) What is the importance of service marketing ?

b) M/s Ayur Beauty products was set up in 1999 by Mrs. Pandey and has been a medium sized business firm. Its key activities were manufacturing and selling of herbal cosmetics and perfumes. Their top selling perfume "Musk" has been a favourite among young females and it has great demand. Its new raw material is an organic extract from musk-deers in Nepal. After a recent regulation enforced in Nepal, the trapping and killing of musk-deers has been restricted. This has pushed up the raw material price by 50%. Mr. Veneet has joined as marketing manager of M/s "Ayur Beauty Products" and he seeks your advice on two grounds.

Questions :

i) Whether to raise the price of "Musk" perfume ? If so, how will the customers respond to it ?

ii) Whether to use synthetic (chemical) raw material ? But this could prove false the company's claim of being a "Herbal" company.

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BBABMC 209/BBMBMC 209

Credit Based III Semester B.B.A./B.B.M. Degree Examination, Nov./Dec. 2018
(2012 Scheme)
COMMERCIAL LAW

Time : 3 Hours

Max. Marks : 120

- Instructions :**
- 1) Support your answer with **relevant** case laws.
 - 2) Section – A : Answer in **one or two** sentences **each**.
 - 3) Section – B : Answer in **not more than two** pages **each**.
 - 4) Section – C : Answer in **not more than six** pages **each**.

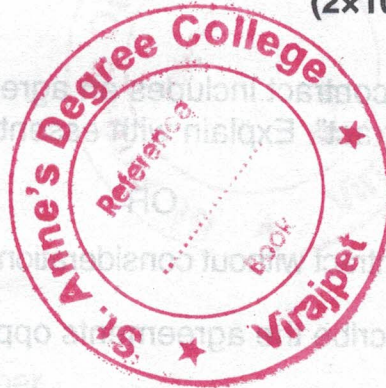
SECTION – A

(2 marks each)

1. Answer any ten questions.

(2×10=20)

- a) What is executed contract ?
- b) Give the meaning of 'Void-ab-initio'.
- c) Give the meaning of 'Quid pro quo'.
- d) What is Novation ?
- e) What do you mean by wagering agreement ?
- f) Give two examples for Negotiable Instruments.
- g) Define Intellectual property.
- h) What is digital signature ?
 - i) What is right to information ?
 - j) What do you mean by 'Damages' ?
 - k) What is statute law ?
 - l) Give the meaning of general offer.



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SECTION – B
(Eight marks each)

Answer any five questions. (8x5=40)

2. Explain the case Mohiribibi v/s. Dharmodas Ghosh.
3. What are the sources of Indian mercantile law ?
4. Define and differentiate between coercion and undue influence.
5. What are the different kinds of quasi contract ?
6. Distinguish between promissory note and bill of exchange.
7. Make a comparative analysis patent and copyright.
8. What are the objectives of IT Act, 2000 ?

SECTION – C
(20 marks each) (20x3=60)

9. "All contract includes an agreement however, all agreement need not include contract". Explain with essentials of contract.

OR

"Contract without consideration is void". Explain with exceptions and essentials.

10. Describe the agreements opposed to public policy.

OR

Define proposal. Explain the essential elements of valid proposal.

11. What is breach of contract ? Explain the remedies for breach of contract.

OR

Describe the performance of contract and explain the discharge of a contract.

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BBABMC 213/BBMBMC 213

**Credit Based Third Semester B.B.A./B.B.M. Degree Examination,
Nov./Dec. 2018
(2018-19 Batch Onwards)
BUSINESS ECONOMICS**

Time : 3 Hours

Max. Marks : 80

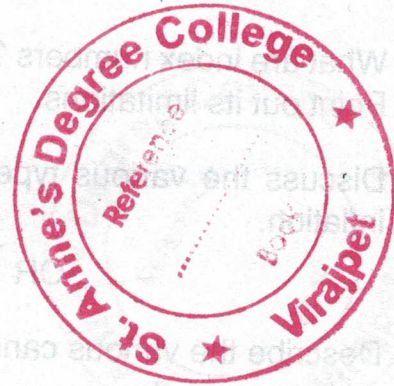
SECTION – A

(One mark each)

1. Answer **any ten** in **one** or **two** sentences **each** :

(1×10=10)

- What is A.P.C. ?
- Define deficit financing.
- Mention any two methods of debt redemption.
- Give the meaning of recession.
- What do you mean by proportional tax ?
- Define stagflation.
- What is macro economics ?
- Expand G.S.T.
- What is globalisation ?
- Define inflationary gap.
- Give the meaning of cost of living index number.
- What is meant by autonomous investment ?



SECTION – B

(Five marks each)

Answer **any five** in **not** more than **two** pages **each** :

(5×5=25)

- Describe the different phases of trade cycle.
- What are the objectives of fiscal policy ?

P.T.O.



4. Discuss the major issues involved in macro economics.
5. Explain the circular flow of money.
6. State the qualitative tools of monetary policy.
7. Briefly explain the different sources of Public revenue.
8. Explain the role of deficit financing in economic development.

SECTION - C
(15 marks each)

Answer the following in **not** more than **six** pages **each** : **(15×3=45)**

9. Explain Keynes's theory of employment.

OR

What are index numbers ? Explain the steps in construction of index numbers.
Point out its limitations.

10. Discuss the various types of inflation. Describe the methods of controlling inflation.

OR

Describe the various canons of taxation.

11. Discuss the objectives and functions of W.T.O.

OR

Explain the merits and demerits of globalisation.

(Five marks each)

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BBABMC 208/BBMBMC 208

**Credit Based III Semester B.B.A./B.B.M. Degree Examination, Nov./Dec. 2018
(2012 Scheme) (2017-18 and Earlier Batches)**

**ECONOMICS
Business Economics**

Time : 3 Hours

Max. Marks : 80

Instruction : Answer all the questions.

SECTION – A

(1×10=10)

(One mark each)

1. Answer **any ten** in **one** or **two** sentences **each** :

- a) Define aggregate demand.
- b) What do you mean by depression ?
- c) What do you mean by induced investment ?
- d) What do you mean by inflation ?
- e) What do you mean by 'Boom' ?
- f) What is specific tax ?
- g) What is meant by 'Regressive Taxation' ?
- h) Give the meaning of capital expenditure.
- i) What is globalisation ?
- j) Give the meaning of cost push inflation.
- k) What are index numbers ?
- l) What is special assessment ?



P.T.O.



SECTION – B
(5 marks each)

(5×5=25)

Answer **any five** in not more than **2** pages **each**.

2. Explain the importance of macro economics.
3. What are the different phases of trade cycle ?
4. Briefly explain the effects of taxation on production.
5. Write a note on the impact of WTO on Indian economy.
6. Explain the policy implications of Keynesian theory.
7. Give the classification of public debt.
8. Explain the Keynesian concept of inflationary gap.

SECTION – C
(15 marks each)

(15×3=45)

Answer should **not** exceed **6** pages **each**.

9. Discuss the principles of effective demand.

OR

Explain the causes and effect of inflation. Suggest remedies.

10. Describe the various canons of taxation.

OR

Explain the origin, objectives and functions of W.T.O.

11. Define consumption function. What are the factors determining it ?

OR

Explain the reasons for increasing public expenditure.

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BBABMC 207/BBMBMC 207

**Credit Based III Semester B.B.A./B.B.M. Degree
Examination, Nov./Dec. 2018
(2012 Scheme)
BUSINESS MATHEMATICS**

Time : 3 Hours

Max. Marks : 80

- Instructions :** 1) *Mathematical Tables will be supplied on request.*
2) *Use of scientific calculator is not permitted.*

**SECTION - A
(one mark each)**

1. Answer any ten of the following.

(1×10=10)

a) If $A = \begin{bmatrix} 4 & 1 \\ 2 & x \end{bmatrix}$ and $|A| = 0$ find x .

b) If $A = \begin{bmatrix} 3 & -1 \\ 2 & 8 \end{bmatrix}$ and $B = \begin{bmatrix} -4 & 1 \\ 2 & 3 \end{bmatrix}$ find $2A + 3B$.

c) Find x if 18% of x is 36.

d) Divide ₹ 1,100 amongst A and B in the ratio 3 : 8.

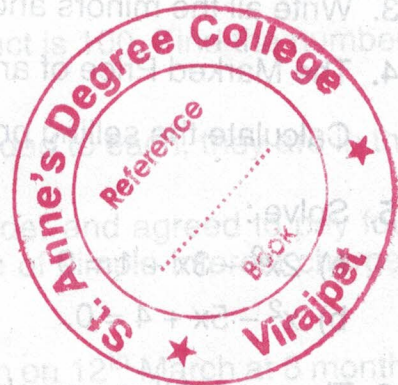
e) Find the 12th term of the series 2, 6, 9, 12,

f) Find the common ratio of the series 6, 12, 24, 48,

g) The n^{th} term of an A.P. is $2n^2 + 3n$. Find the fourth term.

h) What is the Banker's Discount on a bill of face value ₹ 5,200 which is due after 2 months at 8% p.a. ?

i) A retailer sells an item for ₹ 1,200 after 12% cash discount. What is the list price of the item ?



P.T.O.



- j) What is the value of x if $\log_2 x = 4$?
- k) Calculate the simple interest on ₹ 14,500 for 262 days at 12% rate p.a.
- l) What sum should be invested today so that it becomes ₹ 6,000 after 4 years at 12% compound interest ?

SECTION - B
(5 marks each)

Answer any five of the following:

2. If $A = \begin{bmatrix} 4 & 5 & 6 \\ 1 & 2 & 3 \\ 7 & 8 & 9 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 0 & 2 \\ 2 & 0 & 1 \\ 3 & 2 & 1 \end{bmatrix}$

Find $2A + 3B - 4I$ and $5A + 4B + 3I$.

- 3. Write all the minors and cofactors of the matrix A, if $A = \begin{bmatrix} 4 & 2 & 1 \\ 7 & 1 & 9 \\ 3 & 3 & 7 \end{bmatrix}$
- 4. The Marked Price of an article is ₹ 12,000.

Calculate the selling price after 8% Trade discount and 5% cash discount.

5. Solve :

- a) $2x^2 - 3x + 1 = 0$
- b) $x^2 - 5x + 4 = 0$.

- 6. The sum of three numbers in Arithmetic Progression is 15 and their product is 120. Find the numbers.
- 7. Calculate Equated Due Date.
 - ₹ 4,000 drawn on 2 June
 - ₹ 8,000 drawn on 4 July
 - ₹ 7,250 drawn on 7 August
 - ₹ 8,500 drawn on 10 September
- 8. 8 men each working 10 hours a day can finish a work in 25 days. How many men are required to finish working 12 hours a day in 14 days ?



SECTION – C
(15 marks each)

Answer any three of the following.

(3×15=45)

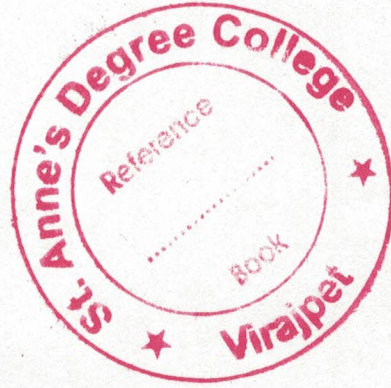
9. a) Using Cramer's Rule solve :

$$X + 2Z = 5$$

$$X + 2Y = 7$$

$$X + Y + Z = 6.$$

b) Solve X if $X + \frac{5}{X} = 6.$



10

5

10. a) Using Inverse matrix method solve

$$X + 2Y + 3Z = 36$$

$$3x + Y + Z = 16$$

$$4X + 3Y + 2Z = 34.$$

10

b) The sum of two numbers is 25 and their product is 100. Find the numbers. 5

11. a) Two numbers are in the ratio 6 : 11. If 10 is added to each, they are in the ratio 7 : 12. Find the numbers. 5

b) A person borrowed ₹ 8,000 from a money lender and agreed to pay four installments of ₹ 2,500 quarterly. Find the rate of simple interest charged p.a. by the money lender. 5

c) A banker paid ₹ 2,600 for a bill of ₹ 2,720 drawn on 12th March at 8 months date. On what day the bill was discounted if the rate of interest is 8% p.a. ? 5

12. a) Show that $\log \frac{81}{16} - \log \frac{8}{6} + \log \frac{128}{243} = \log^2 .$ 5

b) Find the compound interest on a sum of ₹ 7,500 for 2 years at the rate 10% p.a. compounded (1) half-yearly (2) quarterly. 5

c) Find the amount of an annuity of ₹ 1,500 in 15 years allowing compound interest at 5% p.a. 5
