

2016

**ECONOMICS - II — HONOURS**

**Sixth Paper**

[ A 32A ]

(Module - I)

**Full Marks - 50**

*The figures in the margin indicate full marks*

*Candidates are required to give their answers in their own words as far as practicable*

**Group - A**

1. Answer the following questions : 2×4

(a) What is a capital good ? Can any final good be capital good ?

*Or*

What is inventory investment ?

(b) How can you deduce personal income from national income ?

*Or*

How would you distinguish between GDP and GNP ?

(c) What adjustments are required to arrive at the figure of net national product at factor cost, given the net national product at market prices ?

(d) What is the problem of double counting in the context of national income analysis ?

**Group - B**

2 Answer the following questions :

(a) What is Keynesian consumption function ? How would you derive the saving function from the Keynesian consumption function ? Explain your answers diagrammatically. 3+3

*Or*

What is investment multiplier ? Find out the value of this multiplier if the marginal propensity to save is 0.15. Mention, in this context, two possible sources of leakages in the multiplier mechanism. 2+2+2

(b) Derive the tax multiplier and the Government expenditure multiplier in the Simple Keynesian Model. Which one has a larger magnitude, and with what implications on the net expansion of output ? 4+2

[Turn Over]

(c) If the consumption function is given by  $C = 40 + 0.8Y$  and the investment function is expressed as  $I = 60 - 200r$ , find out the equation for commodity market equilibrium. What will be the shape of the resulting curve obtained from this equation? [The symbols have their usual meanings].

4+2

(d) What will be, in the Keynesian framework, the shape of the curve showing equilibrium in the money market, when the supply of money is exogenously given? How will the curve shift in the event of an increase in the money supply?

5+1

*Or*

Examine how far fiscal policy is more effective than monetary policy in combatting a recessionary situation.

6

(e) Explain the concepts of inflationary gap and deflationary gap with the help of suitable diagram(s):

3+3

*Or*

Examine the relationship between quantity of money and price level, with the help of the Quantity Theory of Money.

6

### Group - C

3 Answer the following question:

Explain the concept of High-powered Money. If there is an increase in the High-powered Money, what will be its impact on the total supply of Money?

4+8

*Or*

What is cost-push inflation? Explain the causes of cost-push inflation.

4+8

2016

INDIAN FINANCIAL SYSTEM — HONOURS

Seventh Paper

(A – 3 3 – A)

(Accounting and Finance Group)

Full Marks – 100

*The figures in the margin indicate full marks*

*Candidates are required to give their answers in their own words as far as practicable*

Group – A

1. Briefly discuss the role of financial system in the economic development of a country. 5

*Or*

Write a note on indirect finance. 5

2. State the functions of NABARD. 5

*Or*

Briefly discuss the objectives of SIDBI. 5

3. State the importance of development banks in industrial development of a country. 5

4. Distinguish between organised and unorganised financial markets. 5

*Or*

Give a brief overview of the components of the Indian Financial markets. 5

5. Briefly discuss the functions of Grievance Redressal cell of stock exchange in India. 5

6. Discuss in brief the role of stock exchanges in investors' protection. 5

*Or*

State the role of court in investors' protection. 5

[Turn Over]

## Group - B

7. (a) Explain the concept of mutual fund.  
 (b) Discuss the functions of General Insurance Corporation of India. 4+6

Or

- (a) State the objectives of LIC of India.  
 (b) Write a note on Insurance Regulatory and Development Authority of Indian (IRDAI). 4+6

8. (a) Distinguish between real interest rate and nominal interest rate.  
 (b) Explain the relationship between short-term and long-term interest rate. 5+5
9. (a) State the features of treasury bill markets in India.  
 (b) Distinguish between certificate of deposit and commercial paper. 5+5
10. Discuss the important functions or services rendered by merchant bankers. 10

Or

- (a) What is credit rating?  
 (b) Discuss the SEBI guidelines regarding credit agencies in India. 3+7

## Group - C

11. (a) Discuss the alternative measures to money supply in India.  
 (b) Give a brief account of supervisory role of Reserve Bank of India. 10+5

Or

- (a) Discuss the various methods of credit control as followed by Reserve Bank of India.

- (b) Give an outline of the development functions of Reserve Bank of India. 10+5

12. (a) 'Stock market plays an important role in Indian economy'—Discuss.  
 (b) Explain the role of Brokers and Portfolio consultants in the stock markets. 7+8

Or

- (a) Discuss the methods of raising funds through the primary market in India.

- (b) What do you mean by 'insider trading'? 12+3

2016

## FINANCIAL MANAGEMENT – HONOURS

## Eighth Paper

(A – 34 A)

( Accounting and Finance Group )

Full Marks – 100

*The figures in the margin indicate full marks**Candidates are required to give their answers in their own words as far as practicable*

## Group – A

5×6

1. Explain two basic functions of Financial Management.
2. Specify the limitations of 'Maximisation of Profit' as the objective of a firm.

**OR**

X. Ltd is considering two alternative financial plans. Following information relates to these plans :

	Plan-A	Plan-B
Equity Share (₹ 10 each) (₹)	2,00,000	1,00,000
12% Debenture (₹)	—	1,00,000
Profit after tax (₹)	28,000	19,600
Price-Earning ratio	11	7.5

Which of the plans is preferable considering the wealth maximization objective ?

3. Briefly state the concept of risk and return.
4. Mr. Chiko is offered the following cash inflows :

End of year :	1	2	3	4	5
Amount (₹)	15,000	20,000	32,000	20,000	18,000

Calculate the amount receivable by Mr. Chiko if he wants the whole amount at the end of 4th year. [Applicable interest rate is 10% p.a. compounded annually]

**OR**

State the reasons of having time preference for money.

[Turn Over ]

5. Specify the distinguishing features of Capital Expenditure decision.

OR

A company decided to start a project at a cost of ₹ 120,000, part of which will be financed by long-term debt. Following are the expected result for first year of the project.

Sales : 5000 units @ ₹ 50

Variable cost per unit ₹ 30 and Fixed operating cost ₹ 18,000 (excluding depreciation)

Depreciation : as per books of account ₹ 20,000

as per Income Tax rules ₹ 24,000

Interest on loan (to finance the project) ₹ 8,000 & Applicable tax rate 30%.

You are required to calculate net cash flow (NCF) for the first year.

6. A company is considering an investment proposal to install a new machine at a cost of ₹ 50,000. The facility has a life expectancy of 5 years with ₹ 5,000 salvage value. For the project additional working capital of ₹ 10,000 will also be required. The applicable income tax rate is 30%.

Estimated EBDIT from the proposal are: ₹ 20,000; ₹ 22,000; ₹ 19,000; ₹ 17,000 and ₹ 24,000 respectively for 5 years.

Compute the Accounting rate of return for the proposal.

### Group - B

10x7

7. A manufacturing company has a capacity to produce 60,000 units p.a. The cost structure at that capacity and selling price p.u. are given below :

Materials	₹ 5
Labour	₹ 2
Overhead	₹ 5 (60% variable; of the fixed overhead ₹ 30,000 represents depreciation)
	₹ 12
Profit	₹ 3
Selling Price	₹ 15

The other details are -

- Raw material storage period - 2 months; Processing time - 1 month and Finished Goods in store - 1 month.
- Debtors and Creditors turnover are 6 and 12 times a year respectively.
- Lag in payment of overhead is 1/2 month.

Assuming that the company will be able to utilise 80% of its capacity - estimate the working capital requirement on cash cost basis.

10

OR

- (a) What do you mean by permanent and temporary working capital ?
- (b) State the factors to be considered in determining working capital of a firm.

4+6

8. (a) The equity shares of a company is currently (i.e., at the end of 2015) selling in the market at ₹ 300 (F.V. is ₹ 100 each). It is known that the company has paid a dividend of ₹ 30 in 2014 and it has a steady growth rate of 4% per year. Find its cost of equity.

(b) The capital structure of a company is given below :

Equity share capital ( 5,000 shares of ₹ 100 each)	₹ 5,00,000
10% Preference share (2,000 shares of ₹ 100 each)	₹ 2,00,000
12% Debentures	₹ 3,00,000
	₹ 10,00,000

Its operating profit is ₹ 2,90,000. The market price of each equity share is ₹ 250 and of each preference share is ₹ 125.

Find the cost of each source of capital assuming

- (i) corporate tax to be 30% and
- (ii) corporate dividend tax to be 10%.

3+7

9. Zica Ltd provides you the following information:

Capital structure: 12% Debenture ₹ 2,00,000; 9% Preference Share Capital ₹ 3,00,000 and 4,000 Equity Shares of ₹ 100 each.

Revenue and operating cost details: Sales 3,000 units @ ₹ 600 p.u.; Variable Operating Cost p.u. ₹ 350; Fixed Operating cost ₹ 3,20,000.

Corporate Income Tax rate and Dividend Distribution Tax rate may be assumed at 30% and 10% respectively.

Calculate DOL, DFL and DCL of Zica Ltd. Using the concept of leverage, find the percentage change in EPS when sales increase by 10%.

10

**OR**

Critically discuss the Net Operating Income (NOI) approach of capital structure theory.

10

10. Following figures relate to a new project for which a machine is to be acquired at a cost of ₹ 2,50,000 and initially ₹ 60,000 is to be invested as working capital:

Year	1	2	3	4
EBDIT (₹)	80,000	90,000	1,45,000	1,20,000
Depreciation (₹)	75,000	62,000	48,000	25,000

At the beginning of 2<sup>nd</sup> year, an amount of ₹ 10,000 is to be introduced as additional working capital.

On completion of project, i.e., at the end of 4th year, it is expected that ₹ 40,000 will be realised from sale of scrap and working capital will be recovered in full.

[ Turn Over ]

Cost of capital is 12% and applicable tax rate is 30%.

Calculate NPV of the project and comment on its acceptability.

[Given the present value of ₹ 1 receivable at the end of each year for 4 years at 12% p.a. compounded annually are 0.893, 0.797, 0.712 and 0.636 respectively.] 10

OR

Given below are the information relating to some projects :

Projects	A	B	C	D	E	F
NPV (₹)	2,20,000	(15,000)	1,40,000	1,62,000	76,000	64,000
Profitability Index	1.22	0.95	1.20	1.18	1.19	1.16

Suppose the firm has a budget ceiling of ₹ 20,00,000. Advise the firm on selection of projects assuming that the projects are not divisible. 10

11. (a) Zori Ltd estimated its current assets and current liabilities for the coming year to be ₹ 8,40,000 and ₹ 2,20,000. Of the current assets, the value of core current assets is ₹ 1,20,000.

You are required to calculate for Zori Ltd. the maximum permissible bank finance under all the three methods of lending norms as suggested by the Tandon Committee.

(b) Briefly state two short term sources of financing working capital. 6+4

12. Discuss with example the 'Constant dividend payout ratio' and 'Stable dividend per share' policy of distribution of dividend by a company. 10

OR

Why dividend decision is significant to the firm ?

A company has 1,00,000 equity shares of ₹ 10 each. The company expects its earnings at ₹ 6,00,000 during the next financial year and its cost of capital is 10%. Using Walter's Model, what dividend policy would you recommend when the rate of return on investment is estimated at

(i) 8% and

(ii) 12% ?

What will be the price of each equity share if your recommendation is accepted ? 4+6

13. State the importance of financial control. Also state the steps involved in financial control. 10



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INDIAN FINANCIAL SYSTEM — HONOURS

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(Accounting and Finance Group)

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*Or*

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Briefly discuss the objectives of SIDBI. 5

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5. Briefly discuss the functions of Grievance Redressal cell of stock exchange in India. 5

6. Discuss in brief the role of stock exchanges in investors' protection. 5

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[Turn Over]

## Group - B

7. (a) Explain the concept of mutual fund.  
 (b) Discuss the functions of General Insurance Corporation of India. 4+6
- Or*
- (a) State the objectives of LIC of India.  
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Date of Exam. 01.04.2016

E (III) – Financial Accounting – III – H – 5 (A – 31 – A)

2016  
FINANCIAL ACCOUNTING – III – HONOURS  
Fifth Paper  
(A-31-A)  
(Accounting and Finance Group)  
Full Marks – 100

*The figures in the margin indicate full marks*

*Candidates are required to give their answers in their own words as far as practicable*

**Group – A**

Answer the following questions

1. From the following information prepare a Comparative Income Statement : 5

Particulars	2014	2015
	Rs.	Rs.
Sales	3,75,000	5,25,000
Cost of goods sold	3,00,000	3,75,000
Administrative, Selling and Distribution Expenses	22,500	30,000
Other Income	7,500	15,000
Income Tax	50%	50%

*Or*

- Distinguish between Traditional Approach and Modern Approach to Financial Statement Analysis. 5

2. Classify the following transactions according to 'Operating', 'Investing' and 'Financing' activities : 5

- Profit on sale of fixed assets ₹ 25,000.
- 5000 Preference shares of ₹ 100 each were redeemed.
- Payment of Income Tax ₹ 60,000.
- Dividend paid ₹ 1,00,000 on equity shares.
- Dividend received on shares ₹ 12,000.

**Group – B**

Answer the following questions

3. From the following information, calculate the ratio of sales in each case separately.

- (a) (i) Date of acquisition – 1st April, 2014; date of incorporation—1st July, 2014 and date of closing the books of accounts — 31st March every year.

(ii) The sales for the year ending on 31st March 2015 were ₹ 24,00,000 of which ₹ 4,80,000 were sold during the first six months of the accounting period.

(b) (i) The accounts were made up to 31st March, 2015. The company was incorporated on 1st August, 2014 to take over a business from the preceding 1st April.

(ii) Total sales for the year were ₹ 12,00,000. It is observed that the sales for February and March 2015 are one and half times of the average of those for the year, whilst those for May and July 2014 are only half of the average.

(c) (i) S Ltd. was incorporated on 1st July, 2014 to take the existing business of P from 1st April, 2014. Date of closing the books of accounts — 31st March, 2015.

(ii) Monthly sales in April 2014, February 2015 and March 2015 are double the average monthly sales for remaining months of the year.

(d) (i) D. Ltd. was incorporated on 1st August, 2014, to take over the running business of SRK Bros. with effect from 1st April, 2014. The Company received the certificate of commencement of business on 1st October, 2014.

(ii) Total sales for the year, which amounted to ₹ 32,00,000 arose evenly upon the date of certificate of commencement, whereafter sales recorded an increase of  $\frac{2}{3}$ rd during the remaining period.

10

*Or*

On 1.4.14 Srijani Ltd. had 30,000 equity shares of Rs. 10 each in X Ltd. purchased for Rs.2,80,000. On 15.07.14 X Ltd. made a bonus issue of 1 fully paid-up share for 3 held. Again on 1.9.14 X Ltd. offered right entitlement of 3 for 5 held on that date at a premium of Rs.2 per share. Srijani Ltd. exercised one-fourth of its right entitlement and sold the balance at Rs.4 each on 9.9.14. On 20.08.14 X Ltd. declared dividend of 10% for the year ended on 31.03.14. Bonus Shares were not considered for dividend. On 30.01.15 Srijani Ltd. sold one-third of the right shares purchased at cost plus 25%. Show Investment account in the books of Srijani Ltd. for the accounting year 2014-15. Apply average cost method.

10

4. From the following particulars of a company, ascertain the value of goodwill under the following methods :

(i) 3 years' purchase of super profit method and,

(ii) Capitalization method

(iii) Annuity of super profit method when Present value of an annuity of Re.1.00 for 3 years at 10% interest is 2.49.

**Particulars :**

(a) Average Capital Employed in the business is ₹ 14,00,000.

(b) Net Trading Profit of the firm for past 3 years : ₹ 2,15,200; ₹ 1,81,400 and ₹ 2,25,000.

(c) Market rate of interest on investment – 8%.

(d) Rate of risk return on capital invested in business is 2%.

[Turn Over]

(e) The profit included non-recurring profits on average basis of ₹ 2,000 out of which it was considered that even non-recurring profits had a tendency to be recurring at an average rate of ₹ 1,200 per year.

(f) Sundry assets of the company ₹15,00,000 and current liabilities – ₹ 60,000. Ignore taxation. 5+3+2

*Or*

From the following information of K Ltd., you are required to calculate the value of shares when

- (i) only a few of shares are to be sold, and  
(ii) majority shares are to be sold.  
(a) Share Capital : 4,00,000 equity shares of ₹ 10 each fully paid.  
(b) Profit after tax, dividends declared and retained earnings :

Year	Profit after tax ( ₹ )	Dividend Declared ( ₹ )	Retained earnings ( ₹ )
2010	8,00,000	5,20,000	2,80,000
2011	12,00,000	6,00,000	6,00,000
2012	14,20,000	6,80,000	7,40,000

5. (a) Write a note on Fair Value Accounting. 10  
(b) Discuss in brief two different concepts of Capital Maintenance. 5+5

### Group – C

Answer the following questions

6. The statement of assets and liabilities of H Ltd. and its subsidiary S Ltd. as on 31.03.15 stood as follows :

	H Ltd. ( ₹ )	S Ltd. ( ₹ )
<b>I. Equity and Liability :</b>		
1. <u>Shareholders Fund</u> :		
(a) Equity shares of Rs.10 fully paid	10,00,000	4,00,000
(b) Reserves and Surplus :		
General Reserve (1.4.14)	4,80,000	2,00,000
Profit and Loss Balance	1,14,400	1,64,000
2. Non-current Liabilities :	—	—
3. <u>Current Liabilities</u> :		
Short term borrowings	2,00,000	—
Bills Payable	—	26,000
Sundry Creditors	1,39,600	40,000
Total	19,34,000	8,30,000

II. Assets :	H ( ₹ )	S ( ₹ )
1. <u>Non-Current Assets</u> :		
(a) Fixed Assets :		
Land and Buildings	3,60,000	3,80,000
Plant and Machinery	4,80,000	2,70,000
(b) <u>Non-current Investment</u>		
Investment in equity shares of S Ltd.	6,45,500	—
Other non-current investment	74,500	—
2. <u>Current Assets</u> :		
Inventory	2,20,000	80,000
Sundry Debtors	96,000	84,000
Bills Receivables	27,600	—
Cash and Cash equivalents	30,400	16,000
Total	<u>19,34,000</u>	<u>8,30,000</u>

The following information are also available :

(a) H Ltd. acquired 32,000 equity shares of ₹ 10 each in S Ltd. on October 1, 2014 for ₹ 6,45,500.

(b) The statement of Profit and Loss of S Ltd. showed a profit of ₹ 60,000 on 01.04.2014, out of which a dividend of 10% was paid on November 1, 2014 for the year 2013-14.

(c) The Plant and Machinery of S Ltd. which stood at ₹ 3,00,000 on 1.4.2014 was considered worth ₹ 3,60,000 on the date of acquisition by H Ltd.

(d) Sundry debtors of S Ltd. include loan to H Ltd. ₹ 14,000. H Ltd. remitted a cheque of ₹ 14,000 to S Ltd. on 27th March 2015 for repayment of Loan, which was received by S Ltd. in April 2015.

Prepare a Consolidated Balance Sheet of H Ltd. and its subsidiary S Ltd. as on 31st March 2015.

15

7. The Balance Sheets of EB Ltd. and MB Ltd. as on 31st March 2015 were as under :

	EB Ltd. ( ₹ )	MB Ltd. ( ₹ )
<b>I. Equity and Liabilities :</b>		
1. <u>Shareholders Fund</u> :		
(a) Equity share capital ( ₹ 10)	31,000	33,500
(b) Reserve and Surplus :		
Profit and Loss Balance	19,000	1,500
2. <u>Non-current Liabilities</u>	—	—
3. <u>Current Liabilities</u> :		
(a) Trade Payable	14,000	40,000
(b) Provision for Employee Benefits	6,000	15,000
	<u>70,000</u>	<u>90,000</u>

	EB Ltd. ( ₹ )	MB Ltd. ( ₹ )
<b>II. Assets :</b>		
1. <u>Non-Current Assets :</u>		
Land and Buildings	15,000	10,000
Plant and Machinery	20,000	12,000
Furniture	10,000	7,000
2. <u>Current Assets :</u>		
Inventory	10,000	27,000
Trade Receivables	12,000	25,000
Cash and Cash Equivalent	3,000	9,000
	70,000	90,000

UB Ltd. was formed to amalgamate the business of the two companies. The authorised capital of UB Ltd. being ₹ 2,00,000 divided into equity shares of ₹10 each of which 2,000 shares were issued for cash at a premium of ₹ 2 per share and are fully paid. The Amalgamation took place on 1st April 2015 on the following terms:

(a) All the assets and liabilities of EB Ltd. and MB Ltd. to be assumed by UB Ltd. for a total consideration of 8000 equity shares of UB Ltd.

(b) The Non-current and Current assets and liabilities are taken over at book value.

(c) Goodwill to be valued on the basis of 2.5 years purchases of past 3 years' average profit, after deducting Normal Profit 10% on capital employed as on 31st March 2015 of each Company.

(d) The Trading Profits for the year ended :

	EB Ltd. ( ₹ )	MB Ltd. ( ₹ )
31.03.13	7,000	5,450
31.03.14	8,850	6,450
31.03.15	8,900	6,850

(e) Ignore Taxation.

You are required to compute and prepare :

(i) Number of shares to be issued by UB Ltd. to shareholders of EB Ltd. and MB Ltd. stating the ratio thereof to their former holding.

(ii) Balance Sheet of UB Ltd. after amalgamation of two Companies.

15

*Or*

Green Ltd. has decided to reconstruct the Balance Sheet since it had accumulated huge losses. The following is the Balance Sheet of the Company on 31.3.15 before reconstruction.

**I. Equity and Liabilities :**

₹

1. Shareholders Fund :

(a) 60000 equity shares of ₹10 each fully paid up	6,00,000
4000, 12% Preference shares of ₹100 each fully paid up	4,00,000

(b) Reserves and Surplus	
Profit and Loss balance	(1,65,000)
2. <u>Non-Current Liabilities</u> :	
11% Debentures	2,50,000
3. <u>Current Liabilities</u> :	
Trade Payables (Sundry Creditors)	45,500
Bank Overdraft	1,36,750
	<hr/>
	12,67,250
	<hr/>
<b>II. Assets :</b>	
1. <u>Non-Current Assets</u> :	
(i) Fixed Assets	
(a) Tangible :	
Land and Building	5,00,000
Plant and Machinery	2,75,000
Furniture	32,500
(b) Intangible :	
Goodwill	1,50,000
(ii) Non-Current Investment	Nil
2. <u>Current Assets</u> :	
Inventories	2,63,000
Trade Receivables (Sundry Debtors)	46,000
Cash and Cash Equivalent	750
	<hr/>
	12,67,250
	<hr/>

**Note :** The preference dividends are in arrear for five years.

A capital reduction scheme is submitted as follows :

- (i) Equity Shares to be reduced to ₹5 each.
- (ii) All arrears of preference dividends to be cancelled.
- (iii) Each Preference Share to be reduced to ₹75 and then exchanged for one new 12% Preference Share of ₹50 each and five Equity Shares of ₹5 each.
- (iv) The debit balance i.e. the negative balance of profit and loss to be written off. Plant and Machinery to be written down as much as possible. Goodwill is to be written off in full.
- (v) The debentures are to be redeemed at 5% premium. Holders being given the option to subscribe at par for new 12% Debentures.

Approval of the Court is obtained. 200,000 new Equity Shares are issued at par payable in full on application. Holders of old debentures to the extent of ₹1,00,000 exercised their option and subscribed for new debentures. Expenses in connection with the scheme amounted to ₹6,750.

Show the journal entries (without narration) and set out the new Balance Sheet of the Company.



2016

## ADVANCED BUSINESS MATHEMATICS — HONOURS

Sixth Paper

(A – 32 – A)

Full Marks – 50

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## Group – A

1. Answer the following questions :

5×2

(a) Given  $f(x) = x + 2$  and  $g(x) = \frac{x^2 - 4}{x - 2}$ . When  $f(x) = g(x)$ ? Give reasons for your answer.

*Or*

Find the domain of definition of the function  $f(x) = \frac{x}{\sqrt{x-1}}$ .

(b) If  $f(x) = 2x^2 - 3x + 4$ , for what value of  $x$  is  $2f(x) = f(2x)$ .

(c) Using definition find the derivative of  $3x^2 + 5$ .

*Or*

Find  $\frac{d^2y}{dx^2}$  when  $y^2 = 4ax$ .

(d) If  $A = \begin{bmatrix} 3 & x+1 \\ y & 5 \end{bmatrix}$  and  $B = \begin{bmatrix} x-1 & 5 \\ x-3y & 5 \end{bmatrix}$  are equal find the value of  $x$  and  $y$ .

(e) If  $P(A) = \frac{1}{2}$ ,  $P(B) = \frac{1}{3}$  and  $P(A \cap B) = \frac{1}{4}$ , find the value of  $P(A \cap B^c)$ .

*Or*

If  $A$  and  $B$  are two independent events with  $P(A) = 0.3$  and  $P(B) = 0.5$ . Evaluate  $P(A \cup B)$ .

## Group – B

2. Answer the following questions :

(a) Three numbers are given whose sum is 180 and first of these number is twice the second number. If the product of the number is greatest, find the numbers.

*Or*

6

[Turn Over]

A firm produces  $x$  units of output at a total cost of Rs.  $(300x - 10x^2 + \frac{1}{3}x^3)$ . Find the output at which average cost is equal to marginal cost?

(b) If  $x^m y^n = (x+y)^{m+n}$ , show that  $\frac{dy}{dx} = \frac{y}{x}$ . Hence show that  $\frac{d^2y}{dx^2} = 0$ .

(c) Show that  $\begin{vmatrix} 2a & a-b-c & 2a \\ 2b & 2b & b-c-a \\ c-a-b & 2c & 2c \end{vmatrix} = (a+b+c)^3$ .

Or

If  $x+y+z=0$ , show that  $\begin{vmatrix} x & y & z \\ x^2 & y^2 & z^2 \\ y+z & z+x & x+y \end{vmatrix} = 0$ .

(d) Solve the following equations by matrix method:

$$3x - y + 2z = 7$$

$$x + 2y - z = 3$$

$$x + y + z = 4.$$

Or

If  $P = \begin{bmatrix} -1 & 3 & 5 \\ 1 & -3 & -5 \\ -1 & 3 & 5 \end{bmatrix}$ , show that  $P^2 = P$ , and then find  $Q$  such

that  $3P^2 - 2P + Q = I$ , where  $I$  is the unit matrix of order 3.

(e) Evaluate the following:

(i)  $\lim_{x \rightarrow \infty} \frac{x^4 - 3x^2 + 7}{x^3 + x^2 - 5}$ , (ii)  $\lim_{x \rightarrow 1} \frac{x^2 - 1}{\sqrt{3x+1} - \sqrt{5x-1}}$ .

### Group - C

3. Answer the following questions:

(a) A committee of 5 members is to be formed from 6 men and 4 ladies. Find the probability that the ladies may be a majority in the committee.

Or

One bag contains 4 white and 2 black balls. Another bag contains 3 white and 5 black balls. If one ball is drawn from each bag, find the probability that one is white and one is black.

(b) Evaluate (*any one*):

(i)  $\int \frac{dx}{\sqrt{2x+5} + \sqrt{2x+3}}$

(ii)  $\int \frac{(2x-8)}{\sqrt{1+x+x^2}} dx$ .

2016

## FINANCIAL ACCOUNTING – III – HONOURS

Fifth Paper

(A-31-A)

(Accounting and Finance Group)

Full Marks – 100

*The figures in the margin indicate full marks**Candidates are required to give their answers in their own words as far as practicable*

## Group – A

Answer the following questions

1. From the following information prepare a Comparative Income Statement : 5

Particulars	2014	2015
	Rs.	Rs.
Sales	3,75,000	5,25,000
Cost of goods sold	3,00,000	3,75,000
Administrative, Selling and Distribution Expenses	22,500	30,000
Other Income	7,500	15,000
Income Tax	50%	50%

Or

Distinguish between Traditional Approach and Modern Approach to Financial Statement Analysis. 5

2. Classify the following transactions according to 'Operating', 'Investing' and 'Financing' activities : 5

- Profit on sale of fixed assets ₹ 25,000.
- 5000 Preference shares of ₹ 100 each were redeemed.
- Payment of Income Tax ₹ 60,000.
- Dividend paid ₹ 1,00,000 on equity shares.
- Dividend received on shares ₹ 12,000.

## Group – B

Answer the following questions

3. From the following information, calculate the ratio of sales in each case separately.

(a) (i) Date of acquisition – 1st April, 2014; date of incorporation—1st July, 2014 and date of closing the books of accounts — 31st March every year.

(ii) The sales for the year ending on 31st March 2015 were ₹ 24,00,000 of which ₹ 4,80,000 were sold during the first six months of the accounting period.

(b) (i) The accounts were made up to 31st March, 2015. The company was incorporated on 1st August, 2014 to take over a business from the preceding 1st April.

(ii) Total sales for the year were ₹ 12,00,000. It is observed that the sales for February and March 2015 are one and half times of the average of those for the year, whilst those for May and July 2014 are only half of the average.

(c) (i) S Ltd. was incorporated on 1st July, 2014 to take the existing business of P from 1st April, 2014. Date of closing the books of accounts — 31st March, 2015.

(ii) Monthly sales in April 2014, February 2015 and March 2015 are double the average monthly sales for remaining months of the year.

(d) (i) D. Ltd. was incorporated on 1st August, 2014, to take over the running business of SRK Bros. with effect from 1st April, 2014. The Company received the certificate of commencement of business on 1st October, 2014.

(ii) Total sales for the year, which amounted to ₹ 32,00,000 arose evenly upon the date of certificate of commencement, whereafter sales recorded an increase of  $\frac{2}{3}$ rd during the remaining period.

10

Or

On 1.4.14 Srijani Ltd. had 30,000 equity shares of Rs. 10 each in X Ltd. purchased for Rs.2,80,000. On 15.07.14 X Ltd. made a bonus issue of 1 fully paid-up share for 3 held. Again on 1.9.14 X Ltd. offered right entitlement of 3 for 5 held on that date at a premium of Rs.2 per share. Srijani Ltd. exercised one-fourth of its right entitlement and sold the balance at Rs.4 each on 9.9.14. On 20.08.14 X Ltd. declared dividend of 10% for the year ended on 31.03.14. Bonus Shares were not considered for dividend. On 30.01.15 Srijani Ltd. sold one-third of the right shares purchased at cost plus 25%. Show Investment account in the books of Srijani Ltd. for the accounting year 2014-15. Apply average cost method.

10

4. From the following particulars of a company, ascertain the value of goodwill under the following methods :

(i) 3 years' purchase of super profit method and,

(ii) Capitalization method

(iii) Annuity of super profit method when Present value of an annuity of Re.1.00 for 3 years at 10% interest is 2.49.

**Particulars :**

(a) Average Capital Employed in the business is ₹ 14,00,000.

(b) Net Trading Profit of the firm for past 3 years : ₹ 2,15,200; ₹ 1,81,400 and ₹ 2,25,000.

(c) Market rate of interest on investment — 8%.

(d) Rate of risk return on capital invested in business is 2%.

[Turn Over]

(e) The profit included non-recurring profits on average basis of ₹ 2,000 out of which it was considered that even non-recurring profits had a tendency to be recurring at an average rate of ₹ 1,200 per year.

(f) Sundry assets of the company ₹15,00,000 and current liabilities – ₹ 60,000. Ignore taxation.

5+3+2

Or

From the following information of K Ltd., you are required to calculate the value of shares when

- (i) only a few of shares are to be sold, and  
 (ii) majority shares are to be sold.  
 (a) Share Capital : 4,00,000 equity shares of ₹ 10 each fully paid.  
 (b) Profit after tax, dividends declared and retained earnings :

Year	Profit after tax ( ₹ )	Dividend Declared ( ₹ )	Retained earnings ( ₹ )
2010	8,00,000	5,20,000	2,80,000
2011	12,00,000	6,00,000	6,00,000
2012	14,20,000	6,80,000	7,40,000

5. (a) Write a note on Fair Value Accounting.

10

(b) Discuss in brief two different concepts of Capital Maintenance.

5+5

### Group – C

Answer the following questions

6. The statement of assets and liabilities of H Ltd. and its subsidiary S Ltd. as on 31.03.15 stood as follows :

	H Ltd. ( ₹ )	S Ltd. ( ₹ )
<b>I. Equity and Liability :</b>		
1. <u>Shareholders Fund</u> :		
(a) Equity shares of Rs.10 fully paid	10,00,000	4,00,000
(b) Reserves and Surplus :		
General Reserve (1.4.14)	4,80,000	2,00,000
Profit and Loss Balance	1,14,400	1,64,000
2. Non-current Liabilities :	—	—
3. <u>Current Liabilities</u> :		
Short term borrowings	2,00,000	—
Bills Payable	—	26,000
Sundry Creditors	1,39,600	40,000
Total	19,34,000	8,30,000

Short term borrowings	2,00,000	—
Bills Payable	—	26,000
Sundry Creditors	1,39,600	40,000
Total	<u>19,34,000</u>	<u>8,30,000</u>

II. Assets :		H (₹)	S (₹)
1. <u>Non-Current Assets</u> :			
(a) Fixed Assets :			
Land and Buildings	3,60,000	3,80,000	
Plant and Machinery	4,80,000	2,70,000	
(b) Non-current Investment			
Investment in equity shares of S Ltd.	6,45,500	—	
Other non-current investment	74,500	—	
2. <u>Current Assets</u> :			
Inventory	2,20,000	80,000	
Sundry Debtors	96,000	84,000	
Bills Receivables	27,600	—	
Cash and Cash equivalents	30,400	16,000	
Total	<u>19,34,000</u>	<u>8,30,000</u>	

The following information are also available :

(a) H Ltd. acquired 32,000 equity shares of ₹ 10 each in S Ltd. on October 1, 2014 for ₹ 6,45,500.

(b) The statement of Profit and Loss of S Ltd. showed a profit of ₹ 60,000 on 01.04.2014, out of which a dividend of 10% was paid on November 1, 2014 for the year 2013-14.

(c) The Plant and Machinery of S Ltd. which stood at ₹ 3,00,000 on 1.4.2014 was considered worth ₹ 3,60,000 on the date of acquisition by H Ltd.

(d) Sundry debtors of S Ltd. include loan to H Ltd. ₹ 14,000. H Ltd. remitted a cheque of ₹ 14,000 to S Ltd. on 27th March 2015 for repayment of Loan, which was received by S Ltd. in April 2015.

Prepare a Consolidated Balance Sheet of H Ltd. and its subsidiary S Ltd. as on 31st March 2015.

7. The Balance Sheets of EB Ltd. and MB Ltd. as on 31st March 2015 were as under :

I. Equity and Liabilities :		EB Ltd. (₹)	MB Ltd. (₹)
1. <u>Shareholders Fund</u> :			
(a) Equity share capital (₹ 10)		31,000	33,500
(b) Reserve and Surplus :			
Profit and Loss Balance		19,000	1,500
2. Non-current Liabilities			
3. <u>Current Liabilities</u> :			
(a) Trade Payable		14,000	40,000
(b) Provision for Employee Benefits		6,000	15,000
		<u>70,000</u>	<u>90,000</u>

	EB Ltd. ( ₹ )	MB Ltd. ( ₹ )
<b>II. Assets :</b>		
1. <u>Non-Current Assets :</u>		
Land and Buildings	15,000	10,000
Plant and Machinery	20,000	12,000
Furniture	10,000	7,000
2. <u>Current Assets :</u>		
Inventory	10,000	27,000
Trade Receivables	12,000	25,000
Cash and Cash Equivalent	<u>3,000</u>	<u>9,000</u>
	<u>70,000</u>	<u>90,000</u>

UB Ltd. was formed to amalgamate the business of the two companies. The authorised capital of UB Ltd. being ₹ 2,00,000 divided into equity shares of ₹10 each of which 2,000 shares were issued for cash at a premium of ₹ 2 per share and are fully paid. The Amalgamation took place on 1st April 2015 on the following terms:

(a) All the assets and liabilities of EB Ltd. and MB Ltd. to be assumed by UB Ltd. for a total consideration of 8000 equity shares of UB Ltd.

(b) The Non-current and Current assets and liabilities are taken over at book value.

(c) Goodwill to be valued on the basis of 2.5 years purchases of past 3 years' average profit, after deducting Normal Profit 10% on capital employed as on 31st March 2015 of each Company.

(d) The Trading Profits for the year ended :

	EB Ltd. ( ₹ )	MB Ltd. ( ₹ )
31.03.13	7,000	5,450
31.03.14	8,850	6,450
31.03.15	8,900	6,850

(e) Ignore Taxation.

You are required to compute and prepare :

(i) Number of shares to be issued by UB Ltd. to shareholders of EB Ltd. and MB Ltd. stating the ratio thereof to their former holding.

(ii) Balance Sheet of UB Ltd. after amalgamation of two Companies.

15

**Or**

Green Ltd. has decided to reconstruct the Balance Sheet since it had accumulated huge losses. The following is the Balance Sheet of the Company on 31.3.15 before reconstruction.

<b>I. Equity and Liabilities :</b>	<b>₹</b>
1. <u>Shareholders Fund :</u>	
(a) 60000 equity shares of ₹10 each fully paid up	6,00,000
4000, 12% Preference shares of ₹100 each fully paid up	4,00,000

₹	
(b) Reserves and Surplus	
Profit and Loss balance	(1,65,000)
2. <u>Non-Current Liabilities</u> :	
11% Debentures	2,50,000
3. <u>Current Liabilities</u> :	
Trade Payables (Sundry Creditors)	45,500
Bank Overdraft	1,36,750
	12,67,250

**II. Assets :**

1. <u>Non-Current Assets</u> :	
(i) Fixed Assets	
(a) Tangible :	
Land and Building	5,00,000
Plant and Machinery	2,75,000
Furniture	32,500
(b) Intangible :	
Goodwill	1,50,000
(ii) Non-Current Investment	Nil
2. <u>Current Assets</u> :	
Inventories	2,63,000
Trade Receivables (Sundry Debtors)	46,000
Cash and Cash Equivalent	750
	12,67,250

**Note :** The preference dividends are in arrear for five years.

A capital reduction scheme is submitted as follows :

- (i) Equity Shares to be reduced to ₹5 each.
- (ii) All arrears of preference dividends to be cancelled.
- (iii) Each Preference Share to be reduced to ₹75 and then exchanged for one new 12% Preference Share of ₹50 each and five Equity Shares of ₹5 each.
- (iv) The debit balance i.e. the negative balance of profit and loss to be written off. Plant and Machinery to be written down as much as possible. Goodwill is to be written off in full.
- (v) The debentures are to be redeemed at 5% premium. Holders being given the option to subscribe at par for new 12% Debentures.

Approval of the Court is obtained. 200,000 new Equity Shares are issued at par payable in full on application. Holders of old debentures to the extent of ₹1,00,000 exercised their option and subscribed for new debentures. Expenses in connection with the scheme amounted to ₹6,750.

Show the journal entries (without narration) and set out the new Balance Sheet of the Company.



8. The Balance Sheets of XY Ltd. as on 31st December 2014 and 2015 are as under :

I. Equity and Liabilities :	31.12.14 ( ₹ )	31.12.15 ( ₹ )
1. <u>Shareholders' Fund</u> :		
(a) Equity Share Capital	3,00,000	5,00,000
10% Redeemable Preference Shares	3,00,000	2,00,000
(b) Reserves and Surplus		
General Reserve	40,000	60,000
Capital Reserve	—	50,000
Profit and Loss Balance	36,000	54,000
	—	—
2. <u>Non-Current Liabilities</u> :		
3. <u>Current Liabilities</u> :		
Trade Payable	88,000	1,30,000
Provision for Taxation	56,000	64,000
Proposed Dividend	54,000	66,000
	8,74,000	11,24,000
 II. Assets :		
1. <u>Non-Current Assets</u> :		
(i) Fixed Assets		
(a) <u>Tangible</u> :		
Land and Building	2,00,000	1,50,000
Plant and Machinery	1,80,000	3,82,000
(b) <u>Intangible</u> :		
Goodwill	1,20,000	94,000
(ii) Non-Current Investment	20,000	70,000
2. <u>Current Assets</u>		
Inventory	1,70,000	1,56,000
Trade Receivables	1,50,000	2,16,000
Cash and Cash Equivalent	34,000	56,000
	8,74,000	11,24,000

The following further particulars are given :

(i) In 2015, ₹36,000 depreciation has been written off Plant and Machinery and no depreciation has been charged on Land and Building.

(ii) A piece of land has been sold out and profit on such sale has been transferred to Capital Reserve.

(iii) A plant was sold for ₹24,000 (W.D.V ₹30,000).

(iv) Dividend received amounted to ₹4,200 which included pre-acquisition dividend of ₹1,200.

(v) An interim dividend of ₹20,000 has been paid in 2015.

You are required to prepare :

- (a) Statement of Sources and Application of Funds, and  
 (b) Statement of Charges in Working Capital for the year 2015.

Or

- (i) What are the two methods of preparing Cash Flow Statement? Explain in brief

The following further particulars are given :

(i) In 2015, ₹36,000 depreciation has been written off Plant and Machinery and no depreciation has been charged on Land and Building.

(ii) A piece of land has been sold out and profit on such sale has been transferred to Capital Reserve.

(iii) A plant was sold for ₹24,000 (W.D.V ₹30,000).

(iv) Dividend received amounted to ₹4,200 which included pre-acquisition dividend of ₹1,200.

(v) An interim dividend of ₹20,000 has been paid in 2015.

You are required to prepare :

(a) Statement of Sources and Application of Funds, and

(b) Statement of Charges in Working Capital for the year 2015.

15

Or

(i) What are the two methods of preparing Cash Flow Statement? Explain in brief.

(ii) Distinguish between Cash Flow Statement and Fund Flow Statement.

(iii) Opening Cash and Cash equivalents = Rs. 20,000 (1.4.2014)

Net Profit after depreciation = Rs. 1,75,000

Profit on Sale of machinery = Rs. 10,000

Increase in Current Assets = Rs. 1,25,000

Increase in Current Liabilities = Rs. 1,50,000

Sale of Machine = Rs. 1,70,000

Purchase of Machine = Rs. 2,50,000

Payment of Bank Loan = Rs. 1,60,000

Redemption of Debenture = Rs. 1,00,000

With the help of above information prepare a Cash Flow Statement as per AS-3 for the year 2014-15

5+4+6

9. From the following information, prepare the Projected Statement of Profit and Loss for the next Financial year ending December 31, 2015 and the Projected Balance Sheet as on that date :

Rate of Gross Profit	25%
Net Profit to Equity Capital	10%
Stock Turnover Ratio	5 times
Average Debt Collection period	3 months
Creditors Velocity	3 months
Current Ratio	2
Proprietary ratio (Fixed Assets to Capital Employed)	80%
Capital Gearing Ratio (Preference Shares and Debentures to Equity)	3 : 7
General Reserves and Profit and Loss to issued Equity Capital	25%
Preference Share Capital to Debentures	2

Cost of Sales consists of 40% for materials and balance for wages and overheads. Gross Profit Rs.6,00,000. Working notes should be shown clearly.

(Here, Schedule III is not mandatory for the preparation of Projected Statement of Profit and Loss and Projected Balance Sheet)

15

2016

## ADVANCED BUSINESS MATHEMATICS — HONOURS

Sixth Paper

(A – 32 – A)

Full Marks – 50

*The figures in the margin indicate full marks**Candidates are required to give their answers in their own words as far as practicable*

## Group – A

1. Answer the following questions :

5×2

(a) Given  $f(x) = x + 2$  and  $g(x) = \frac{x^2 - 4}{x - 2}$ . When  $f(x) = g(x)$ ? Give reasons for your answer.

*Or*

Find the domain of definition of the function  $f(x) = \frac{x}{\sqrt{x-1}}$ .

(b) If  $f(x) = 2x^2 - 3x + 4$ , for what value of  $x$  is  $2f(x) = f(2x)$ .

(c) Using definition find the derivative of  $3x^2 + 5$ .

*Or*

Find  $\frac{d^2y}{dx^2}$  when  $y^2 = 4ax$ .

(d) If  $A = \begin{bmatrix} 3 & x+1 \\ y & 5 \end{bmatrix}$  and  $B = \begin{bmatrix} x-1 & 5 \\ x-3y & 5 \end{bmatrix}$  are equal find the value of  $x$  and  $y$ .

(e) If  $P(A) = \frac{1}{2}$ ,  $P(B) = \frac{1}{3}$  and  $P(A \cap B) = \frac{1}{4}$ , find the value of  $P(A \cap B^c)$ .

*Or*

If  $A$  and  $B$  are two independent events with  $P(A) = 0.3$  and  $P(B) = 0.5$ . Evaluate  $P(A \cup B)$ .

## Group – B

2. Answer the following questions :

(a) Three numbers are given whose sum is 180 and first of these number is twice the second number. If the product of the number is greatest, find the numbers.

*Or*

6

[Turn Over]

A firm produces  $x$  units of output at a total cost of Rs.  $(300x - 10x^2 + \frac{1}{3}x^3)$ . Find the output at which average cost is equal to marginal cost?

(b) If  $x^m y^n = (x+y)^{m+n}$ , show that  $\frac{dy}{dx} = \frac{y}{x}$ . Hence show that  $\frac{d^2y}{dx^2} = 0$ .

(c) Show that  $\begin{vmatrix} 2a & a-b-c & 2a \\ 2b & 2b & b-c-a \\ c-a-b & 2c & 2c \end{vmatrix} = (a+b+c)^3$ .

Or

If  $x+y+z=0$ , show that  $\begin{vmatrix} x & y & z \\ x^2 & y^2 & z^2 \\ y+z & z+x & x+y \end{vmatrix} = 0$ .

(d) Solve the following equations by matrix method :

$$3x - y + 2z = 7$$

$$x + 2y - z = 3$$

$$x + y + z = 4$$

Or

If  $P = \begin{bmatrix} -1 & 3 & 5 \\ 1 & -3 & -5 \\ -1 & 3 & 5 \end{bmatrix}$ , show that  $P^2 = P$ , and then find  $Q$  such

that  $3P^2 - 2P + Q = I$ , where  $I$  is the unit matrix of order 3.

(e) Evaluate the following :

(i)  $\lim_{x \rightarrow \infty} \frac{x^4 - 3x^2 + 7}{x^3 + x^2 - 5}$ , (ii)  $\lim_{x \rightarrow 1} \frac{x^2 - 1}{\sqrt{3x+1} - \sqrt{5x-1}}$ .

### Group - C

3. Answer the following questions :

(a) A committee of 5 members is to be formed from 6 men and 4 ladies. Find the probability that the ladies may be a majority in the committee.

Or

One bag contains 4 white and 2 black balls. Another bag contains 3 white and 5 black balls. If one ball is drawn from each bag, find the probability that one is white and one is black.

(b) Evaluate (*any one*) :

(i)  $\int \frac{dx}{\sqrt{2x+5} + \sqrt{2x+3}}$

(ii)  $\int \frac{(2x-8)}{\sqrt{1+x+x^2}} dx$ .