FINAL EXAMINATION

December 2018

P–20(SPBV)
Syllabus 2016

Strategic Performance Management and Business Valuation

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

This paper has been divided into two Sections, viz, Section A *and* Section B.

Section – A : Strategic Performance Management

(50 marks)

Answer Question No. 1 *which is compulsory and* any two *from the rest of this Section.*

1. Choose the correct option from amongst the four alternatives given: 2×5=10

(i) __________ measures overall productivity and efficiency by considering all inputs and all outputs in the production process.

(A) Total Factor Productivity

(B) Partial Factor Productivity

(C) Parametric Index Number Approach

(D) Non-parametric Index Number Approach

(ii) The six sigma DMAIC process consists of

(A) Define, Measure, Analyze, Improve, Control

(B) Define, Manage, Analyze, Improve, Control

(C) Define, Measure, Analyze, Improve, Co-ordination

(D) Deliver, Measure, Analyze, Improve, Control

(iii) A firm has total cost function: $C = 1/9\ X^3 - 1/2\ X^2 - 18\ X + 30$; C is total cost and X is quantity produced. One is wondering whether MC (marginal cost) can ever be zero. If you believe that the firm's MC can be zero, then it will be when X is equal to

(A) 2

(B) 5

(C) 9

(D) None of the above is true

(iv) The supply chain concept originated in what discipline?

(A) Operations

(B) Production

(C) Marketing

(D) Logistics

(v) Which one the following is NOT a type of Benchmarking?

(A) Product Benchmarking

(B) Competitive Benchmarking

(C) Process Benchmarking

(D) Brand Benchmarking

2. (a) (i) What are the components of supply chain management?

(ii) What is operative and collaborative customer relationship management?

(iii) Describe the benefits and limitations of Balance Score Card. 3+3+4=10

(b) (i) What are the steps in developing Balance Score Card?

(ii) Discuss the information to be required for performance measurement under Balance Score Card. 5+5=10

3. (a) The total cost function for a monopolist is given by $TC = 900 + 40\,Q^2$. The demand function for the goods produced by the monopolist is given by $2Q = 48 - 0{\cdot}08\,P$. What will be the profit maximizing price? 8

(b) The following financial data related to the Balance Sheet of XYZ Limited for FY 2017-18 has been extracted from the Annual Report 2017-18:

BALANCE SHEET of XYZ Limited as at March 31.

(₹ In crores)

ASSETS	2018
Non-Current Assets	
(a) Property, Plant and Equipment	70,942·90
(b) Capital Work-in-Progress	5,641·50
(c) Intangible Assets	786·18
(d) Financial Assets	—
(e) Other Assets	2,140·84
Total Non-Current Assets	**79,511·42**

Current Assets	
(a) Inventories	11,023·41
(b) Financial Assets	
(i) Investments	14,640·37
(ii) Trade Receivables	1,875·63
(iii) Cash and Cash Equivalents	4,588·89
(iv) Other Financial Assets	480·62
(c) Other Assets	1,822·94
Total Current Assets	**34,431·86**
TOTAL ASSETS	**1,13,943·28**
EQUITY AND LIABILITIES	
Equity	
(a) Equity Share Capital	1,146·12
(b) Other Equity	60,976·14
Total Equity	**62,122·26**
Non-Current Liabilities	
(a) Financial Liabilities	
(i) Borrowings	24,568·95
(ii) Other Financial Liabilities	19·78
(b) Provisions	1,961·21
(c) Other Liabilities	224·71
Total Non-Current Liabilities	**26,774·65**
Current Liabilities	
(a) Financial Liabilities	
(i) Borrowings	669·88
(ii) Trade Payables	11,242·75
(iii) Other Financial Liabilities	6,541·40
(b) Provisions	735·28
(c) Other Liabilities	5,857·06
Total Current Liabilities	**25,046·37**
TOTAL EQUITY AND LIABILITIES	**1,13,943·28**

Additional Information:

- Market Price of XYZ Limited share having a face value of ₹ 10 as on the Balance Sheet date was ₹ 870.
- Operating Profit of the Company for the year was— ₹ 21,640 crores.
- Operating Profit Margin of the Company is 16·25%.

Using the above information and Altman's Multiple Discriminant Function, you are required to calculate Z-score of XYZ Limited as per the revised Z-Score Model of Altman (1983) and comment on the financial position of the Company. 12

4. (a) Define the following: 2×4=8

(i) Shadow Pricing

(ii) Liquidity Coverage Ratio

(iii) Risk Retention

(iv) Unsystematic Risk

(b) (i) Give the statistical methods of Demand Forecasting (*any four*):

(ii) A manufacturing company is producing ball bearings. It's production-line is set to produce ball bearings with 8 mm diameter. Past records are showing that the process standard deviation of ball bearing diameter is 0·01 millimetres. Assume that you are working in the Quality Control Center of a company. On a particular day 7 samples of size 5 ($n = 5$) are picked up. You are supposed to draw a suitable control chart with 3-sigma limits and comment whether the process is within control limits or not:

1	2	3	4	5	6	7
7·995	7·963	8·012	7·981	8·032	7·999	8·012

4+8=12

Section – B

Business Valuation

(50 marks)

Answer Question No. 5 *which is compulsory and* any two *from the rest of this Section.*

5. Choose the correct option from amongst the four alternatives given, with justification/workings. 1 mark will be for the correct choice and 1 mark will be for the justification/workings. 2×5=10

(i) If the expected rate of return on a stock exceeds the required rate,

(A) the stock is experiencing super normal growth.

(B) the stock should be sold.

(C) the company is not probably trying to maximize price per share.

(D) the stock is a good buy.

(ii) Which of the following items would not be included in a WACC calculation?

(A) Proportion or weight of debt

(B) Proportion or weight of equity

(C) Personal tax rate on interest payments

(D) Cost of equity

(iii) In calculating Market value added of the company __________ is/are considered.

(A) Market value of equity

(B) Market value of debt

(C) Both (A) and (B)

(D) Only economic value added

(iv) An investment is risk free when actual returns are always ___________ the expected returns.

(A) equal to

(B) less than

(C) more than

(D) depends upon circumstances

(v) Duration of a bond will ___________ when the yield-to-maturity on the bond increases.

(A) decrease

(B) increase

(C) not Change

(D) all three above are possible

6. (a) Suvo Ltd. plans to expand its operations and estimates the total cost of the expansion to be ₹ 24 crores. The same is proposed to be financed by internal accruals of ₹ 9 crores and the balance through the rights issue. The current share capital of the company is ₹ 2·40 crores. The shares of the company are currently quoting at ₹ 345. The company proposes to price the rights at ₹ 250.

Based on the information

(i) compute the ratio of the rights.

(ii) calculate the value of the rights.

(iii) determine the gain/loss of a shareholder, if he

(A) Exercises his rights in the rights issue

(B) Allows his rights to expire

(C) Sells his rights

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(b) Das Ltd. is having a Machine carrying amount of which is ₹ 100 lakhs as on 31.03.2013. Its balance useful life is 5 years and residual value at the end of 5 years is ₹ 5 lakhs. Estimated future cash flows from the Machine for the next 5 years are:

Years	Estimated cash flows (₹ in lakhs)
2014	52
2015	34
2016	32
2017	28
2018	32

Compute "Value in use" for plant if the discount rate is 15% and also compute the recoverable amount if net selling price of the machine as on 31.12.2013 is ₹ 55 lakhs. 8

7. Hard Company Limited is planning to acquire Soft Company Limited and merge it with the Company. The following financial information has been extracted from the respective Annual Reports of 2018 of these companies:

(₹ In crores)

Particulars	Hard Company Limited	Soft Company Limited
Sales	₹ 1,233·00	₹ 270·18
Less: Operating Expenses	₹ 678·15	₹ 148·60
Operating Profit	**₹ 554·85**	**₹ 121·58**
Less: Interest	₹ 75·00	₹ 75·00
Profit Before Tax	**₹ 479·85**	**₹ 46·58**
Less: Tax @30%	₹ 143·96	₹ 13·97
Profit After Tax	**₹ 335·90**	**₹ 32·61**
Assets		
Non-Current Assets	₹ 8,560·00	₹ 4,750·00
Current Assets	₹ 5,475·00	₹ 2,560·00
Total Assets	**₹ 14,035·00**	**₹ 7,310·00**
Equity and Liabilities		
Equity Capital (Face Value - ₹ 10 per share)	₹ 500·00	₹ 125·00
Other Equities	₹ 6,780·00	₹ 3,545·00
Total Equity	**₹ 7,280·00**	**₹ 3,670·00**
Non-Current Liabilities	₹ 4,750·00	₹ 2,450·00
Current Liabilities	₹ 2,005·00	₹ 1,190·00
Total Equity and Liabilities	**₹ 14,035·00**	**₹ 7,310·00**
Ratios:		
Net Profit Margin Ratio	27·24%	12·07%
Return on Equity	4·61%	0·89%
Price/Earnings Ratio	14·29	10·35

Required:

(i) What is the market price of each company's share before merger?

(ii) Assuming that the management of Hard Company Limited (HCL) estimates that th shareholders of Soft Company Limited (SCL) will accept an offer of one share of HC for four shares of SCL. If there are no synergic effects and post-merger Price/Earnings Ratio remains unchanged, then what will be the market price of the post-merger HCL share?

(iii) Will the shareholders of HCL be better or worse off than they were before the merger?

(iv) Due to synergic effects, the management of HCL estimates that the earnings will increase by 20%. In such a case, what will be the new post-merger EPS and price per share if the new Price/Earnings Ratio of HCL will be 15? Will the shareholders be better off or worse off than before the merger? 20

8. (a) Discuss the relationship between economic value added and market value added. 8

(b) You are the Director of Ram & Company. One of the projects you are considering is the acquisition of Shyam & Company. Shyam, the owner of Shyam & Company, is willing to consider selling his company to Ram & Company if he is offered an all-cash purchase price of ₹ 5 million. The project estimates that the purchase of Shyam & Company will generate the following profit after-tax cash flow:

Year	Cash Flow (in ₹)
1	10,00,000
2	15,00,000
3	20,00,000
4	25,00,000
5	30,00,000

If you decide to go ahead with this acquisition, it will be funded with Ram's standard mix of debt and equity at the firm's weighted average (after-tax) cost of capital of 9 per cent. Ram's tax rate is 30 per cent. Should you recommend acquiring Shyam & Company to your CEO? 12

PVF@ 9 per cent is:

Year	1	2	3	4	5
PVF	0·917	0·842	0·772	0·708	0·650
