KB 2– Business Management Accounting
Suggested Answers and Marking Guide

SECTION 1

Question 01

Relevant learning outcome/s:
1.1.1 Assess the key features of the absorption costing method and the ABC method. 1.1.2 Demonstrate how overheads are related to end products/services using the absorption costing method (flat rate used with no allocation or apportionment or re-allocation expected) and ABC method (multiple drivers used). 1.1.3 Evaluate product profitability and customer profitability decisions using information generated from absorption costing and activity based costing. 1.1.4 Evaluate the importance of ABC in planning and control (Activity Based Budgeting) and management (Activity Based Management).

A.

Suggested detailed answer:

Calculation of price per tyre (Rs.)					
Type	Rubber	Labour	OH (W1)	Total Cost	Selling Price
Heavy Duty	8,000	300	1,200	9,500	11,875
Industrial	6,000	600	900	7,500	9,375
Racing	5,500	1,200	825	7,525	9,406.25

Working 1

Type	*Production volume*	*kg*
Heavy Duty	*4,000*	*160,000*
Industrial	*2,500*	*75,000*
Racing	*3,000*	*82,500*
Total		*317,500*

$$OAR = \frac{Rs.9,525,000}{317,500}$$

$$OAR = Rs.30 \text{ per kg}$$

Marking Guide	
OAR	= 1 mark
Applying overheads for the products	= 0.5 marks
Selling price	= 0.5 marks

B.

Suggested detailed answer:

Calculation of price per tyre (Rs.)

Type	Rubber	Labour	Overheads (W2)				TC	Selling Price
			Assembl.	Mix.	Set-ups	Finish.		
Heavy Duty	8,000	300	225	135	87.48	93.57	8,840	11,050
Industrial	6,000	600	225	135	70.00	187.14	7,218	9,022.50
Racing	5,500	1,200	675	540	350.00	374.28	8,638	10,797.50

Working 2- Cost driver rates

Type	Total AMH	Total MMH	Batch size	Set-ups	Total LH
Heavy Duty	4,000	4,000	40	100	4,000
Industrial	2,500	2,500	50	50	5,000
Racing	9,000	12,000	10	300	12,000
	15,500	18,500		450	21,000
Total cost (Rs.)	3,487,500	2,497,500		1,575,000	1,965,000
Cost Driver rate (Rs.)	225/ AMH	135/MMH		3500/ Set-up	93.57/ LH

Evaluation:

The ABC approach attributes the cost of resources used to each product on a more appropriate basis than the traditional absorption costing method. Thus, the cost of tyres as presently calculated per absorption costing method does not reflect the actual cost of the product. The cost per ABC costing is lower for heavy duty and industrial tyres while it is higher for racing tyres, indicating mispricing of tyres under the present costing method. The cost of racing tyres under ABC is Rs. 8,638 but this product is sold at Rs. 9,183 giving only a marginal profit. Thus, Seal could increase the selling price of racing tyres and consider reducing the present price of heavy duty and industrial tyres to match the prices of other tyre suppliers.

Marking Guide	
Cost driver rates	= 2 marks
Applying overheads for the products	= 1.5 marks
Selling price	= 0.5 marks
Evaluation	=4 marks

Question 02

Relevant learning outcome/s:
5.1.2 Discuss cash management options (surplus and deficit managing options). 5.1.4 Discuss available options for inventory management. 5.1.5 Assess price and/or rate of an investment/borrowing instrument as part of cash management (including implied/effective interest rate, interest yield and yield to maturity). 5.1.7 Assess optimum inventory decision (EOQ) including the decision of whether to accept a quantity discount or not.

A.

Suggested detailed answer:

Actions that Unibal Sales (Pvt.) Ltd. can take to manage the cash deficit in Q1:

- Arranging a bank overdraft facility.
- Obtaining more finance from suppliers through negotiation.
- Reducing finished goods inventory through better stock management.
- Reducing credit given to customers or offer discount incentives.
- Debt factoring or bill discounting.

Possible actions it could take in respect of cash surpluses:

- Invest short-term (fixed deposit, treasury bills, call deposits).
- Increase debtors and stocks to boost sales.
- Pay creditors early and obtain discounts.

Marking Guide
0.5 marks per point explained Maximum 3 marks

B.

Suggested detailed answer:

$$\text{Selling price of bills} = \text{Face Value} \times \left[1 - \left(\frac{\text{Rate of return} \times \text{Days remaining}}{365}\right)\right]$$

$$\text{Selling price of bills} = 500{,}000 \times \left[1 - \left(\frac{0.08 \times 40}{365}\right)\right]$$

=Rs. 495, 616

Marking Guide

2 marks for the answer with the use of correct formula/method

C.

Suggested detailed answer:

1.

$$EOQ = \sqrt{\frac{2 \times D \times C_o}{C_h}}$$

$$EOQ = \sqrt{\frac{2 \times 12{,}000 \times 1{,}500}{30}}$$

EOQ = 1,095 units

2.

Total cost when ordering the EOQ		
Purchase price	[800 x 12,000]	9,600,000
Ordering cost (Co)	[1,500 x (12,000/1,095)]	16,432
Holding cost (Ch)	[(1,095/2) x 30]	16,432
Total cost		9,632,864

Total cost if 1,500 units are ordered		
Purchase price	[800 x 12,000 x 0.97]	9,312,000
Ordering cost (Co)	[1,500 x (12,000/1,500)]	12,000
Holding cost (Ch)	[(1,500/2) x 30]	22,500
Total cost		9,346,500

Since there is a cost saving due to the bulk discount, Unibal Sales (Pvt.) Ltd. should increase the order size of Component P to qualify for the bulk discount.

Marking Guide	
EOQ calculation	= 2 marks
Total cost when ordering the EOQ	= 1 mark
Total cost if 1,500 units are ordered	= 1 mark
Decision	= 1 mark

Question 03

Relevant learning outcome/s:
3.5.1 Demonstrate optimal solutions (profit maximising or cost minimising) under multiple constraints (graphically: identify decision variables, develop linear programming model, solve and interpret/simplex tableau: only forming initial tableau and interpreting the final tableau.

Suggested detailed answer:

1.

i. Optimal product mix and contribution				Marking Guide
	Product mix (kg)	Contribution per kg	Total contribution	
Chemical B	21,000	140	2,940,000	0.25
Chemical C	6,750	180	1,215,000	0.25
Total			4,155,000	0.5

ii. Unutilised production resources		Marking Guide
Unutilised machine time (hours)	85	0.5
Unutilised common material (kg)	450	0.5

The last column of the tableau gives the unutilised resources under each slack variable which represents scarce resources and optimal quantity for each product. (Please refer first column and last column). Unutilised time which is 85 hours is 5,100 minutes.

iii. Opportunity cost of scarce resources		Marking Guide
Opportunity cost per minute of labour (Rs.)	42.5	0.5
Opportunity cost per minute of quality checking (Rs.)	5.0	0.5

As per the final tableau, the values of the last row under each slack variable (scarce resources) represent the opportunity costs (also named as Shadow Prices) of the respective slack variable. In other words, it gives the impact to the contribution of a loss of one unit of the respective slack variable. For example, if one minute of labour time is lost, the contribution will reduce by Rs.42.50.

2.

		Marking Guide
Shadow price of S_4 (per minute) (Rs.)	42.50	
Shadow price of S_4 (per hour) (Rs.)	2,550.00	0.5
Overtime expenses per hour (Rs.)	450.00	
Additional contribution per OT hour (Rs.)	2,100.00	0.5
Total additional contribution 20 hrs (Rs.)	42,000.00	0.5
This proposal is acceptable due to the additional contribution of Rs. 42,000.		0.5

3.

Optimal mix					Marking Guide
	Present mix	Output change per minute of quality checking time	Total change	New optimal mix	
Chemical A (kg)	No production				
Chemical B (kg)	21,000	1.00	600	**21,600**	0.5
Chemical C (kg)	6,750	0.75	(450)	**6,300**	0.5

Unused resources	Marking Guide

	Present	Change per quality minute	Change	Unutilised qty.	
S1 - Machine time (minutes)	5,100	0.500	300	**5,400**	0.5
S2 - Quality checking time (minutes)	Fully utilised				
S3 - Material X (kg)	450	(0.050)	(30)	**420**	0.5
S3 - Labour time (minutes)	Fully utilised				

4.

Revised product mix			Marking Guide
Chemical A		1,000kg	0.5
Chemical B	21,000 kg - (0.5 x 1,000 kg)	20,500 kg	0.5
Chemical C	6,750 kg - (0.125 x 1000 kg)	6,625 kg	0.5

Based on the values of the second column (Product A) of the final tableau.

Unused scarce resources			Marking Guide
Unutilised machine time (minutes)	5,100 min - (0.5 min x 1000)	4,600 minutes	0.5
Unutilised common material (kg)	450 kg + (0.125 kg x 1000)	575 kg	0.5

Based on the values of the second column (Product A) of the final tableau.

Contribution		Marking Guide
Present contribution (Rs.)	4,155,000	
Reduced by (Rs.)	(7.5 x 1,000)	
Revised contribution (Rs.)	4,147,500	0.5

Question 04

Relevant learning outcome/s:
5.1.1 Define the term "working capital management". 5.1.3 Discuss receivable and payable management (including credit policy, credit assessment, credit control, and collection and factoring options). 5.1.6 Assess receivable management decisions such as cash discounts, age analysis, change in credit policy including whether to factor or not.

Suggested detailed answer:

1.

Working capital requirement of PCT (Rs. Mn)			Marking Guide
Value of inventories	400 Mn x 70%/360 x 45	35.00	1
Value of debtors	400 Mn x 60%/360 x 90	60.00	1
Cash balance		5.00	0.25
Total current assets		95.00	
Less:			
Value of creditors	400 Mn*70%*60%/360*30	(14)	1
Value of working capital requirement		81.00	0.75

2.

Evaluation of proposed strategy (Rs. Mn)			Marking Guide
Discount amount	400 Mn x 60% x 1.5%	3.60	0.5
Interest savings at 15%			
Reduction in debtors value (using debtors value above)	60 Mn/90 x 30	20.00	0.5
Interest savings	20 Mn x 15%	3.00	0.5
Discount amount is higher than the savings by Rs. 600,000. As such, it is not advisable to reduce the credit terms by 30 days by offering a 1.5% discount.			0.5

3.

Minimum number of days for credit revision (Rs. Mn)			Marking Guide
Minimum cost savings (discount amount as above)		3.60	
Reduction in debtors required	3.60/15%	24.00	1.5
Minimum no. of days for credit revision	24 Mn/60 Mn x 90	36 days	
Credit period should be reduced by more than 36 days (credit period below 54 days) to justify a 1.5% discount.			0.5

4.

- Factoring of debtors.
- Low interest short-term borrowing arrangements.
- Requesting increases in credit terms from suppliers.
- Reducing inventory levels.

Marking Guide
0.5 marks for each point Maximum 2 marks

Question 05

Relevant learning outcome/s:
4.2.1 Discuss different types of transfer pricing possible under a decentralized organisational structure (including maximum and minimum price, cost based pricing, market based pricing, dual pricing and negotiated pricing). 4.3.1 Assess divisional performance using Return on Investment (ROI), Residual Income (RI) and Economic Value Added (EVA).

A.

Suggested detailed answer:

Division B will buy 4,000 units at Rs. 250 each from the external supplier. It will have to buy the balance 1,000 units from Division A at Rs. 300 each.

The profit of Division A, when Division B buys from the external supplier will be as follows:

Profit of Division A, when Division B buys from the external supplier (Rs.)		Marking Guide
Sales revenue		
- Internal at Rs.300 per unit	300,000	
- External at Rs.350 per unit	3,500,000	
Total sales revenue	3,800,000	0.5
Variable costs	(1,980,000)	0.5
Fixed costs	(1,400,000)	1
Profit	420,000	

Impact on Division A profit (Rs.)		Marking Guide
Current profit	600,000	
Profit if Division B buys externally	420,000	
Reduction in profit	180,000	1

Impact on Division B profit (Rs.)	Marking Guide
Savings of Rs. 50 each for 4,000 units	
Rs. 200,000 increase in profit	1

Impact on the group (Marbles Ltd.)profit (Rs.)		Marking Guide
Reduction in Division A profit	180,000	
Increase in Division B profit	200,000	
Net increase/(decrease) in profit	20,000	1

Note:

This can be proved as follows:

The group as a whole is paying an extra Rs.70 (250-180) each for 4,000 units while saving Rs.300,000 in fixed costs. There is a net saving of Rs. 20,000.

B.

Suggested detailed answer:

Original ROI

$$\mathbf{ROI} = \frac{\mathbf{1{,}700}}{\mathbf{600 + 3{,}600}} = \mathbf{40.5\%}$$

Revised ROI

$$\text{Revised operating profit} = 1{,}700 - 50 + 104$$
$$= 1{,}754$$

$$\text{Revised capital employed} = 600 + 3{,}600 - 240 + 180$$

$= 4{,}140$

$$\text{Revised ROI} = \frac{1{,}754}{4{,}140} = 42.4\%$$

Impact on the ROI

$$\text{Change in ROI} = \frac{42.4 - 40.5}{40.5} = 4.7 \text{ increase}$$

Marking Guide	
Original ROI	= 1 mark
Revised profit	= 1 mark
Revised capital employed	= 1 mark
Revised ROI	= 1 mark
Impact on the ROI	= 1 mark

SECTION 2

Question 06

Relevant learning outcome/s:
2.1.1 Interpret the basic types of variances (material/labour/variable overhead/fixed overhead/sales). 2.1.2 Discuss the factors to be considered when deciding whether to investigate a variance or not. 2.1.3 Calculate mix and yield variances (under multiple material/labour/sales types), and planning, and operating variances as an addition to the basic operating statement (variance reconciliation statement). 2.1.4 Assess information generated through mix and yield variances and planning, and operating variances. 2.1.5 Demonstrate the impact of the learning/experience curve on planning and controlling.

A.

Suggested detailed answer:

The direct material mix and yield variances must be interpreted with care, as there is a strong relationship between them. A standard mix will represent the combination of inputs that provide an acceptable of output at least possible cost. If some other combination of inputs could produce a lower cost output without sacrificing the quality, then this alternative will be selected as the standard. Therefore, any change in the input mix is expected to have an impact on the yield as well as the price of the input mix.

i. Material price variance

	Standard price/ litre (Rs.)	Actual price/litre (Rs.)	Variance	
X	50	45	5 (F)/ litre	Rs.40,000 (F)
Y	100	80	20 (F)/ litre	Rs.140,000 (F)
Total				Rs. 180,000 (F)

ii. Material mix variance

	Actual mix	Actual mix at standard ratio (6:4)	Variance	
X	8,000	9,000	1,000 litres (F)	50,000 (F)
Y	7,000	6,000	1,000 litres (A)	100,000 (A)
	15,000	15,000		50,000 A

iii. Material yield variance			
Standard yield	Actual yield	Variance	
10,500 litres[1]	11,500 litres	1,000 litres x 100[2]	100,000 (F)

[1] 15,000 x 0.7

[2] This is the weighted average standard price per litre of output.

Alternative yield calculation				
	Actual mix at standard ratio (6:4)	*Standard mix of the actual output*	*Variance*	
X	*9,000*	*9,857*	*857.14 litres (F)*	*42,857 (F)*
Y	*6,000*	*6,571*	*571.43 litres (F)*	*57,143 (F)*
	15,000	*16,429*		*100,000 (F)*

The actual price of both types of material has been reduced, making the material price variance favourable. The reduction in the price of material Y is significant, amounting to 20% of the original standard price when compared with a reduction of 10% for material X.

In adding/mixing the materials the Company has used more of the expensive material Y in place of the cheaper material X. Therefore, the material mix has been made adverse. The Company may have been encouraged to use a greater amount of material Y due to its significant price reduction.

Probably due to the greater use of expensive material Y, the material yield has been made favourable. The Company has been able to obtain 11,500 litres of the weed killer actually when the expected yield was 10,500 litres. This has made the overall material usage variance favourable. However, the Company will have to consider the impact of the change in the mix on the quality of the chemical which may affect the environment and human beings. Also, it will have to comply with the regulations that govern chemical manufacturing.

Marking Guide	
Discussion	= 2 marks
Price variance	= 1 mark
Material mix	=1.5 marks
Material yield	= 1.5 marks
Interpretation	= 3 marks (1 mark per each variance)

B.

Suggested detailed answer:

Cost per unit of the first 75 spraying machines		Marking Guide
Tank	800	
Components	650	
Labour (W1)	4,484	2
VOH	2,242	1
Total cost	8,176	1

Working 1: Labour

$$Average\ time\ = Y = a\ \times\ x^{b}$$
$$Average\ time = Y = 45\ \times\ 75^{(log\ 0.8/log\ 2)}$$
$$Average\ time =\ 11.21\ hours$$

Cost = 11.21h × 400 = 4,484

C.

Suggested detailed answer:

Original standard	**Rs.**	
100 units x 45 h x 400	1,800,000	} Planning variance = 1,387,507 (F)
Revised standard		
1,031.2 h (W2) x 400	412,493	} Operating variance = 93,757 (A)
Actual	506,250	

Working 2:

Time for the first 75 units = 11.21h x 75 = 840.7
Time for the next 25 units = 7.62h x 25 =<u>190.5</u>
<u>1,031.2</u>

Time for the 75th unit = 840.7 - 11.25 x 74 =7.62 h

Interpretation:
If the learning curve impact is not considered, the labour variance is Rs. 1,293,750(F). Whereas if the impact is considered, the labour variance is Rs. 93,757(A). The difference, Rs 1,387,507(F)is due to the error in setting the standard (Planning variance).

D.

Suggested detailed answer:	
Time for the 75th unit	= 0.5 marks
Time for the first 75 units	= 0.5 marks
Time for the next 25 units	= 0.5 marks
Revised standard	= 1 mark
Original standard	= 1 mark
Planning variance	= 1 mark
Operating variance	= 1 mark
Interpretation	=1.5marks

Weedicide is a multinational company operating in the country. By getting the participation of the local managers in the budget setting process it will be able to obtain the following benefits:

- It will enhance the budget ownership of the local managers which will result in a greater level of motivation among the local employees. They will therefore be more encouraged to achieve the budgets which they have set themselves..
- The Company will be able to better utilize the knowledge of the local managers with respect to the farmers' pattern of chemical usage, local regulations governing the agro-chemical industry, local suppliers and competitors, etc. This will result in realistic budgets being prepared while enhancing the budget accuracy.

However, due to this approach the following limitations can be expected:

- The local managers will attempt to prepare easy budgets by overestimating expenses and underestimating revenues (budgetary slack). This will undermine the accuracy of the budgets.
- The managers encouraged by the greater freedom would try to improve their own benefits through budgetary allocation rather than focusing on achieving the Company's objectives with minimum resources (empire building).
- The local managers, may not necessarily possess the requisite knowledge and skills in preparing complex and detailed budgets, especially in the context of a multinational company. This might cause unnecessary delays, inaccuracies and pseudo participation.

Marking Guide
Candidates are supposed to address both benefits and limitations of this approach. 1 mark per point for any of the above points or any other valid point. Maximum 5 marks.

Question 07

Relevant learning outcome/s:
3.7.1 Explain the process of long-term decision making (proposal generating, initial screening, analysis and acceptance, and monitoring and review). 3.7.2 Compute non-discounted cash-flow methods (payback/accounting rate of return) and discounted cash flow methods (net present value/internal rate of return/profitability index/discounted payback) with: - Inflation - Tax - Uncertainty (use of probabilities and sensitivity analysis is expected) 3.7.3 Evaluate projects considering results derived from non-discounted cash flow and DCF valuation methods and other related factors. 2.3.1Assess the value of benchmarking in planning and control, internal and external.

1.

Suggested detailed answer:

Calculation of NPV (Rs. Mn)							Marking Guide
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	
Investment in plant	(100.00)	-	-	-	-	20.00	0.5
Sale of old machine	4.00	-	-	-	-	-	0.5
Loss of contribution (current sales)	-	(7.50)	(7.50)	(7.50)	(7.50)	(7.50)	0.5
Contribution from additional sales	-	12.15	43.20	67.50	81.00	81.00	
Advertising cost	-	(5.00)	(5.00)	(2.00)	(2.00)	(2.00)	0.5
Additional fixed costs	-	(2.00)	(3.00)	(4.00)	(4.00)	(5.00)	0.5
Savings in electricity	-	1.50	1.50	3.00	3.00	3.00	0.5
Savings in rent	-	2.20	2.20	2.20	2.20	2.20	0.5
Compensation and savings in wages	(2.00)	1.50	1.50	1.50	1.50	1.50	1

Net cash flow before taxes	(98.00)	2.85	32.90	60.70	74.20	93.20	
Tax savings/(liability)	-	8.72	(0.25)	(8.04)	(20.78)	(26.10)	
Net cash flow	(98.00)	11.57	32.65	52.66	53.42	67.10	
DR at 15%	1.00	0.870	0.756	0.658	0.572	0.497	
DCF	(98.00)	10.07	24.68	34.65	30.56	33.35	0.5
NPV	**35.31**						0.5

Working 1 - Additional contribution	*Rs.*	*Marking Guide*
Present selling price	*300.00*	
Reduction in selling price	*30.00*	
Reduction in contribution due to price reduction	*30.00*	
Material cost (300-150)	*150.00*	
Savings in material cost (10% x 110)	*15.00*	
Net effect on the contribution per kg.	*(15.00)*	*1*

Working 2 - Additional contribution from additional sales		*Marking Guide*
New selling price (200-20)	*270.00*	
New material cost (110-11)	*135.00*	
New contribution	*135.00*	*0.5*

Working 3 - Calculation of taxes						*Marking Guide*
	Year 1	*Year 2*	*Year 3*	*Year 4*	*Year 5*	
Net cash flow before taxes	*2.85*	*32.90*	*60.70*	*74.20*	*93.20*	
Less:						
Labour compensation	*(2.00)*	*-*	*-*	*-*	*-*	
Assessable income	*0.85*	*32.90*	*60.70*	*74.20*	*93.20*	
Machinery depreciation	*(32.00)*	*(32.00)*	*(32.00)*		*-*	
Taxable income/loss	*(31.15)*	*0.90*	*28.70*	*74.20*	*93.20*	*1*
Taxes at 28%	*(8.72)*	*0.25*	*8.04*	*20.78*	*26.10*	*1*

	Year 1	*Year 2*	*Year 3*	*Year 4*	*Year 5*	*Marking Guide*
Additional sales (kg)	*90,000*	*320,000*	*500,000*	*600,000*	*600,000*	
Additional contribution (Rs. Mn)	*12.15*	*43.20*	*67.50*	*81.00*	*81.00*	*1*

Calculation of IRR		*Marking Guide*
Discount rate	NPV	
15%	35.31	
25%	2.99	
	32.32	1
IRR	$15\% + (35.31/32.32) \times 10\%$	
	25.93%	1

Working- NPV at 25% discount rate						
DR at 25%	*1*	*0.8*	*0.64*	*0.512*	*0.4096*	*0.3276*
DCF	*(98.00)*	*9.26*	*20.89*	*26.96*	*21.88*	*21.99*
NPV at 25%	*2.99*					

Since NPV is positive and IRR>COC, the project can be recommended. 1 mark

2.

Suggested detailed answer:

NPV is superior in evaluating the financial feasibility in the following circumstances.

- The IRR method cannot be guaranteed to rank mutually exclusive projects correctly.
- The percentage return generated by the IRR method can be misleading when choosing between alternatives.
- The IRR method makes incorrect re-investment assumptions by assuming that the interim cash flows can be reinvested at IRR rather than cost of capital.
- Multiple IRRs are possible when unconventional cash flows exist in a project's cash flows.

Marking Guide
1 mark per point with a maximum of 2 marks

3.

Suggested detailed answer:

Benchmarking is the continuous search for and adoption of significant better practices that lead to superior performance by investigating the performance and the practices of other organizations such as a market leading competitor, company in a different industry, etc.

Adoption of identified best practices should improve performance in YC. YC can use the following benchmarking strategies to search for best practices towards customer satisfaction.

- Internal benchmarking:
  Comparing one operating unit or function with another within the same industry.
- Functional benchmarking:
  Comparing internal functions with those of the best external practitioners, regardless of their industry.
- Competitive benchmarking:
  Information is gathered about direct competitors.
- Strategic benchmarking:
  A type of competitive benchmarking aimed at strategic action and organisational change.

The following are some of the areas and practices that can be benchmarked.

- Customer complaints handling procedures.
- Advertising programmes, advertising channels etc.
- Invoicing and product delivery systems.
- Packaging of the product, product design, etc.
- Product pricing.
- Other product promotional campaigns.

Marking Guide
2 marks for benchmarking 3 marks for the three practices

4.

Suggested detailed answer:

Calculation of PI and NPV			Marking Guide
Profitability Index -	Project A	Project B	
$PI = \frac{Present\ value\ of\ future\ cashflows}{Initial\ capital\ outlay}$	1.75	1.60	1
NPV -			
$NPV = PV\ of\ future\ cashflows - Initial\ capital\ outlay$	Rs. 150 Mn	Rs. 180 Mn	1

Both projects are viable since they generate positive NPVs and profitability indexes, more than 1.

According to the Profitablity index, Project A should be selected since it gives a higher index value.

According to NPV, Project B should be selected since it gives a higher NPV.

Therefore, if YC has adequate funds to finance Project B, it should select that, otherwise it should select Project A.

It should be also noted NPV is the most preferred method for the above evaluation since the Profitability index is not suitable for making a choice among mutually exclusive projects with different initial capital outlays.

(1 mark each – max. 3 marks)