1 a.

Solution

COSTING PROFIT AND LOSS ACCOUNT

Particulars	₹
A. Materials	23,01,000
B. Wages	12,05,750
C. Prime Cost	35,06,750
D. Production overheads (20% of Prime Cost)	7,01,350
E. *Less:* Closing Work in progress	97,500
F. Manufacturing cost incurred during the period	41,10,600
G. *Add:* Admn. overheads (9.75 × 31000)	3,02,250
H. Cost of Goods produced	44,12,850
I. *Less:* Closing Finished Goods stock $(4412850 \times \frac{1000}{31000})$	1,42,350
J. Cost of Goods Sold	42,70,500
K. *Add:* Selling and Distribution Overheads (30,000 × ₹.13)	3,90,000
L. Cost of Sales	46,60,500
M. Profit	2,14,500
N. Sales	48,75,000

(II) **PRODUCTION OVERHEADS ACCOUNT**

Particulars	₹	Particulars	₹
To Gen. Ledger Adj. A/c	6,92,250	By WIP A/c	7,01,350
To Balance c/d	9,100		
	7,01,350		7,01,350

Dr. **ADMINISTRATION OVERHEADS ACCOUNT** *Cr.*

Particulars	₹	Particulars	
To Gen. Ledger Adj. A/c	3,10,375	By Finished Goods A/c	3,02,250
		By Balance c/d	8,125
	3,10,375		3,10,375

Dr. **SELLING AND DISTRIBUTION OVERHEADS ACCOUNT** *Cr.*

Particulars	₹	Particulars	
To Gen. Ledger Adj. A/c	3,68,875	By Cost of Sales A/c	3,90,000
To Balance c/d	21,125		
	3,90,000		3,90,000

(iii) **RECONCILIATION STATEMENT**

Particulars		₹
A. Profits as per cost accounts		2,14,500
B. *Add:* Production Overheads over absorbed	9,100	
Selling and Distribution overheads (over absorbed)	21,125	
Dividend received	3,90,000	
Interest on bank deposits	65,000	4,85,225
		6,99,725
C. *Less:* Admn. Overheads under-absorbed	8,125	
Preliminary expenses w/off	22,750	
Goodwill w/off	45,500	
Fines	3,250	
Interest on Mortgage	13,000	
Loss on sale of machinery	16,250	
Taxation	1,95,000	
Write-down of Finished stock (₹.1,42,350 – ₹.1,30,000)	12,350	3,16,225
D. Profit as per Financial Accounts		3,83,500

1 b.

(a) Expense Budget of R Ltd. for the period.....

	Per unit (₹)	50% Capacity 60,000 units Amount (₹)	60% Capacity 72,000 units Amount (₹)
Sales (A)	200.00	1,20,00,000	1,44,00,000
Less: Variable Costs:			
- Direct Material	82.50	49,50,000	59,40,000
- Direct Wages	27.50	16,50,000	19,80,000
- Variable Overheads	27.50	16,50,000	19,80,000
- Direct Expenses	16.50	9,90,000	11,88,000
- Variable factory expenses (75% of ₹ 20 p.u.)	16.50	9,90,000	11,88,000
- Variable Selling & Dist. exp. (80% of ₹ 10 p.u.)	8.80	5,28,000	6,33,600
Total Variable Cost (B)	179.30	1,07,58,000	1,29,09,600
Contribution (C) = (A – B)	20.70	12,42,000	14,90,400
Less: Fixed Costs:			
- Office and Admin. exp. (100%)	--	3,45,000	3,45,000
- Fixed factory exp. (25%)	--	3,45,000	3,45,000
- Fixed Selling & Dist. exp. (20%)	--	1,38,000	1,38,000
Total Fixed Costs (D)	--	8,28,000	8,28,000
(C – D)	--	4,14,000	6,62,400

2 a.

Traditional Absorption Costing

	A	B	C	Total
(a) Quantity (units)	3,000	1,600	-	-
(b) Direct labour (minutes)	30	45	60	-
(c) Direct labour hours (a × b)	2,000	2,250	1,600	5,850

Overhead rate per direct labour hour:

= Budgeted overheads ÷ Budgeted labour hours

= ₹ 99,450 ÷ 5,850 hours

= ₹ 17 per direct labour hour

Unit Costs:

	A (₹)	B (₹)	C (₹)
Direct Costs:			
- Direct Labour	5.00	7.50	10.00
- Direct Material	8.00	12.00	6.00
- Production Overhead:	8.50 $\left(\frac{17\times30}{60}\right)$	12.75 $\left(\frac{17\times45}{60}\right)$	17.00 $\left(\frac{17\times60}{60}\right)$
Total unit costs	21.50	32.25	33.00
Number of units	4,000	3,000	1,600
Total costs	86,000	96,750	52,800

2. Activity Based Costing

	A	B	C	Total
Quantity (units)	4,000	3,000	1,600	-
Weight per unit (Kg.)	4	6	3	-
Total weight	16,000	18,000	4,800	38,000
Machine operations per unit	6	3	2	-
Total operations	24,000	9,000	3,200	36,200
Total batches of Material	10	5	15	30

Material handling rate per kg. = ₹ 29,000 ÷ 38,800 kg. = ₹ 0.75 per kg.

Electricity rate per machine operations = ₹ 39,150 ÷ 36,200

= ₹ 1,082 per machine operations

Storage rate per batch = ₹ 31,200 ÷ 30 batches

= ₹ 1,040 per batch

Unit Costs:

	A (₹)	B (₹)	C (₹)
Direct Costs:			
Direct Labour	5.00	7.50	10.00
Direct material	8.00	12.00	6.00
Production Overheads:			
Material Handling	3.00 (₹0.75 × 4)	4.50 (₹0.75 × 6)	2.25 (₹0.75 × 3)
Electricity	6.49 (₹1.082 × 6)	3.25 (₹1.082 × 3)	2.16 (₹1.082 × 2)
Storage	2.60 $\left(₹10 \times \frac{₹1,040}{4,000}\right)$	1.73 $\left(₹5 \times \frac{₹1,040}{3,000}\right)$	9.75 $\left(₹15 \times \frac{₹1,040}{1,600}\right)$
Total unit costs	25.09	28.98	30.16
Number of units	4,000	3,000	1,600
Total costs	₹ 1,00,360	₹ 86,940	₹ 48,256

3. Comments: The difference in the total costs under the two systems is due to the differences in the overheads borne by each of the products. The Activity Based Costs appear to be more precise.

2 b.

Job Cost Sheet

Customer Details ——— Job No._____

Date of commencement —— Date of completion _____

Particulars	Amount (₹)
Direct materials	70
Direct wages:	
Deptt. X ₹ 2.50 × 8 hrs. = ₹ 20.00	
Deptt. Y ₹ 2.50 × 6 hrs. = ₹ 15.00	
Deptt. Z ₹ 2.50 × 4 hrs. = ₹ 10.00	45
Chargeable expenses	5
Prime cost	120
Overheads :	

Deptt. X $= \frac{₹5,000}{₹10,000} \times 100 = 50\%$ of ₹ 20 = ₹ 10.00

Deptt. Y $= \frac{₹9,000}{₹12,000} \times 100 = 75\%$ of ₹ 15 = ₹ 11.25

Deptt. Z	$= \frac{₹2,000}{₹8,000} \times 100 = 25\%$ of ₹ 10 = ₹2.50	23.75
Works cost		143.75
Selling expenses	$= \frac{₹20,000}{₹2,00,000} \times 100 = 10\%$ of work cost	14.38
Total cost		158.13
Profit (20% of total cost)		31.63
Selling price		189.76

3 a

Basic Calculations:

1. Budgeted Margin per unit (BM) = Budgeted Selling Price per unit – Standard Cost per unit
   Product A = ₹ 20 – ₹ 15 = ₹ 5 Product B = ₹ 10 – ₹ 4 = ₹ 6
2. Actual Margin per unit (AM) = Actual Selling Price per unit – Standard Cost per unit
   Product A = ₹ 25 – ₹ 15 = ₹ 10 Product B = ₹ 5 – ₹ 4 = ₹ 1

BASIC CALCULATIONS FOR THE COMPUTATION OF SALES VARIANCES (ON SALES MARGIN BASIS)

Type of Product	*BQ*	*BM*	*BQ × BM (1)*	*AQ*	*AP*	*AQ × AM (2)*	*AQ × BM (3)*	*RQ*	*RQ × BM (4)*
A	60	5	300	44	10	440	220	66	330
B	40	6	240	66	1	66	396	44	264
Total	100		540	110		506	616		594

Sales Margin (Profit) Variance (2 – 1) = (AQ × AM) – (BQ × BM)
= ₹ 506 – ₹ 540 = ₹ 34 (A)

Sales Margin Price Variance (2 – 3) = (AQ × AM) – (AQ × BM)
Product A = ₹ 440 – ₹ 220 = ₹ 220 (F)
Product B = ₹ 66 – ₹ 396 = ₹ 330 (A)
SMPV = ₹ 110 (A)

Sales Margin Volume Variance (3 – 1) = (AQ × BM) – (BQ × BM)

Product A = ₹ 220 – ₹ 300 = ₹ 80(A)

Product B = ₹ 396 – ₹ 240 = ₹ 156 (F)

SMVV = ₹ 76 (F)

Sales Margin Mix Variance (3 – 4) = (AQ × BM) – (RQ × BM)

Product A = ₹ 220 – ₹ 330 = ₹110 (A)

Product B = ₹ 396 – ₹ 264 = ₹ 132 (F)

SMMV = ₹ 22 (F)

Sales Margin Sub-Volume Variance = (AQ – BQ) × Average Budgeted Margin

$= (110 - 100) \times \frac{540}{100} = ₹54\ (F)$

Alternatively, SMSVV (4 – 1) = (RQ × BM) – (BQ × BM) = ₹ 594 – ₹ 540 = ₹ 54 (F)

Verification:

1. SMV = SMPV + SMVV = ₹ 110 (A) + ₹ 76 (F) = ₹ 34 (A)
2. SMVV = SMMV + SMSVV = ₹ 22(F) + 54 (F) = ₹ 76 (F)

STATEMENT RECONCILING THE STANDARD PROFIT WITH ACTUAL PROFIT

		₹	₹
A.	Budgeted Profit		
	Product A [60 × ₹ 5]	300	
	Product B [40 × ₹ 6]	240	540
B.	*Add:* Fav. Sales Margin Volume Variance		76
C.	Standard Profit [A + B]		616
D.	*Less:* Adverse Sales Price Variance	110	
	Adverse Cost Variance: Product 'A' 44 × (₹ 15 – ₹ 16)	44	
	Product 'B' 66 × (₹ 4 – ₹ 5)	66	220
E.	Actual Profit [C – D]		396

Verification: Actual Profit = [44 × (₹ 25 – ₹ 16] + [66 × (₹ 5 – 5)] = ₹ 396

17.0 ALTERNATIVE FORMULAE USED FOR CALCULATING SALES VARIANCES (BASED ON MARGIN)

Sales Variance	*Formula*
1. *Sales Margin Variance*	= Actual Profit – Budgeted Profit
2. *Sales Margin Price Variance*	= Actual Profit – Standard Profit
3. *Sales Margin Volume Variance*	= Standard Profit – Budgeted Profit
4. *Sales Margin Mix Variance*	= Standard Profit – Revised Standard Profit
5. *Sales Margin Sub-Volume Variance* *or* Sales Margin Quantity Variance	= Revised Standard Profit – Budgeted Profit Where, Actual Profit = AQ × AM Budgeted Profit = BQ × BM Standard Profit = AQ × BM Revised Standard Profit = RQ × BM

3 b

Dr. **CONTRACT ACCOUNT FOR THE YEAR ENDING ON 30TH JUNE 2013** Cr.

Particulars		₹	Particulars	₹
To Materials Consumed:			By Cost of Contract c/d	1,40,000
Purchased	1,00,000			
Less: Closing Stock	25,000	75,000		
To Wages Paid	45,000			
Add: Accrued	5,000	50,000		
To General Expenses		10,000		
To Depreciation on Plant		5,000		
		1,40,000		1,40,000
To Cost of Contract b/d		1,40,000	By Work-in-progress:	
To Notional Profit c/d		80,000	Value of Work Certified	2,00,000
			Cost of Work uncertified	15,000
			Contract Escalation claim	5,000
		2,20,000		2,20,000
To Profit & Loss A/c		20,000	By Notional Profit b/d	80,000
To Work-in-progress (Reserve)		60,000		
		80,000		80,000

Working Notes:

(I) STATEMENT SHOWING THE CALCULATION OF ESCALATION CLAIM

	Before Increase @ 25%	Increase @ 20%	Escalation Claim
Material	₹ 75,000 × 100/125 = ₹ 60,000	60,000 × 20/100 = ₹ 12,000	12,000 × 25/100 = ₹ 3,000
Wages	₹ 50,000 × 100/125 = ₹ 40,000	40,000 × 20/100 = ₹ 8,000	8,000 × 25/100 = ₹ 2,000
			₹ 5,000

(ii) Calculation of Profit to be credited to Profit & Loss Account

$$= 1/3 \times \text{Notional Profit} \times \frac{\text{Cash Received}}{\text{Work Certified}}$$

= 1/3 × ₹ 80,000 × 1,50,000/2,00,000 = ₹ 20,000

4 a

(a) (i) Calculation of Absolute Ton-km for the next month:

Journey	Distance in km	Weight-Up (in MT)	Ton-km	Weight-Down (in MT)	Ton-km	Total
	(a)	(b)	(c)=(a)×(b)	(d)	(e) =(a)×(d)	(c) + (e)
Delhi to Kochi	2,700	14	37,800	6	16,200	54,000
Delhi to Guwahati	1,890	12	22,680	0	0	22,680
Delhi to Vijayawada	1,840	15	27,600	0	0	27,600
Delhi to Varanasi	815	10	8,150	0	0	8,150
Delhi to Asansol	1,280	12	15,360	4	5,120	20,480
Delhi to Chennai	2,185	10	21,850	8	17,480	39,330
Total	10,710	73	1,33,440	18	38,800	1,72,240

Total Ton-Km = 1,72,240 ton-km

(ii) Calculation of cost per ton-km:

Particulars	Amount (Rs.)	Amount (Rs.)
A. Running cost:		
- Diesel Cost {Rs.13.75 × (10,710 × 2)}	2,94,525.00	
- Engine oil cost $\left(\frac{Rs.4,200}{13,000\,km} \times 21,420\,km\right)$	6,920.31	
- Cost of loading of goods {Rs.150 × (73+18)}	13,650.00	
- Depreciation $\left(\frac{Rs.20,00,000}{7,20,000\,km} \times 21,420\,km\right)$	59,500.00	3,74,595.31
B. Repairs & Maintenance Cost $\left(\frac{Rs.12,000}{10,000\,km} \times 21,420\,km\right)$		25,704
C. Standing Charges		
- Drivers' salary (Rs.18,000 × 4 trucks)	72,000	
- Cleaners' salary (Rs.7,500 × 4 trucks)	30,000	
- Supervision and other general exp.	12,000	1,14,000
Total Cost (A + B + C)		5,14,299.31
Total ton-km		1,72,240
Cost per ton-km		2.99

4 b.

Workings:

(a) Variable Overhead rate per unit

$$= \frac{\text{Difference of Overhead at two level}}{\text{Difference in Production units}}$$

$$= \frac{₹2,10,000 - ₹1,80,000}{10,000\text{ units} - 8,000\text{ units}} = ₹15$$

(b) Fixed Overhead = ₹ 1,80,000 – (8,000 units × ₹ 15) = ₹ 60,000

(c) Standard hours per unit of production $= \frac{\text{Std. Overhead Absorption Rate}}{\text{Std. Rate per hour}}$

$$= \frac{₹20}{₹4} = 5\text{ hours}$$

(d) Standard Variable Overhead Rate per hour $= \frac{\text{Variable Overhead per unit}}{\text{Std. hour per unit}}$

$$= \frac{₹15}{5\text{ hours}} = ₹3$$

(e) Standard Fixed Overhead Rate per hour = ₹ 4- ₹ 3 = ₹ 1

(f) Actual Variable Overhead = ₹ 2,95,000 – ₹ 62,500= ₹ 2,32,500

(g) Actual Variable Overhead Rate per Hour $= \frac{₹2,32,500}{74,000\text{ hours}} = ₹3.1419$

(h) Budgeted hours = 12,000 units × 5 hours = 60,000 hours

(i) Standard Hours for Actual Production = 15,560 units × 5 hours = 77,800 hours

(i) Variable Overhead Efficiency and Expenditure Variance:

Variable Overhead Efficiency Variance = Std. Rate per hour (Std. Hours – Actual Hours)

= ₹ 3 (77,800 hours – 74,000 hours)

= ₹ 11,400 (F)

Variable Overhead Expenditure Variance = Actual Hours (Std. Rate - Actual Rate)

= 74,000 hours (₹ 3 - ₹ 3.1419)

= ₹ 10,500 (A)

(ii) Fixed Overhead Efficiency and Capacity Variance:

Fixed Overhead Efficiency Variance = Std. Rate per Hour (Std. Hours-Actual Hours)

= ₹ 1(77,800 hours -74,000 hours) = ₹ 3,800 (F)

Fixed Overheads Capacity Variance = Std. Rate per Hour (Actual Hours -Budgeted Hours)

= ₹ 1(74,000 hours – 60,000 hours)

= ₹ 74,000 – ₹ 60,000= ₹ 14,000 (F)

5 a.

The essential features, which a good cost accounting system should possess, are as follows:

(a) Informative and simple: Cost accounting system should be tailor-made, practical, simple and capable of meeting the requirements of a business concern. The system of costing should not sacrifice the utility by introducing meticulous and unnecessary details.

(b) Accurate and authentic: The data to be used by the cost accounting system should be accurate and authenticated; otherwise it may distort the output of the system and a wrong decision may be taken.

(c) Uniformity and consistency: There should be uniformity and consistency in classification, treatment and reporting of cost data and related information. This is required for benchmarking and comparability of the results of the system for both horizontal and vertical analysis.

(d) Integrated and inclusive: The cost accounting system should be integrated with other systems like financial accounting, taxation, statistics and operational research etc. to have a complete overview and clarity in results.

(e) Flexible and adaptive: The cost accounting system should be flexible enough to make necessary amendment and modifications in the system to incorporate changes in technological, reporting, regulatory and other requirements.

(f) Trust on the system: Management should have trust on the system and its output. For this, an active role of management is required for the development of such a system that reflect a strong conviction in using information for decision making.

5 b

Methods	Description
Single or Output Costing	Here the cost of a product is ascertained, the product being the only one produce like bricks, coals, etc.
Batch Costing	It is the extension of job costing. A batch may represent a number of small orders passed through the factory in batch. Each batch here is treated as a unit of cost and thus separately costed. Here cost per unit is determined by dividing the cost of the batch by the number of units produced in the batch.
Job Costing	In this method of costing, cost of each job is ascertained separately. It is suitable in all cases where work is undertaken on receiving a customer's order like a printing press, motor workshop, etc.
Contract Costing	Here the cost of each contract is ascertained separately. It is suitable for firms engaged in the construction of bridges, roads, buildings etc.
Process Costing	Here the cost of completing each stage of work is ascertained, like cost of making pulp and cost of making paper from pulp. In mechanical operations, the cost of each operation may be ascertained separately; the name given is operation costing.

Operating Costing	It is used in the case of concerns rendering services like transport, supply of water, retail trade etc.
Multiple Costing	It is a combination of two or more methods of costing outlined above. Suppose a firm manufactures bicycles including its components; the parts will be costed by the system of job or batch costing but the cost of assembling the bicycle will be computed by the Single or output costing method. The whole system of costing is known as multiple costing.

5 c

The advantages of zero-based budgeting are as follows:

- It provides a systematic approach for the evaluation of different activities and rank them in order of preference for the allocation of scarce resources.
- It ensures that the various functions undertaken by the organization are critical for the achievement of its objectives and are being performed in the best possible way.
- It provides an opportunity to the management to allocate resources for various activities only after having a thorough cost-benefit-analysis. The chances of arbitrary cuts and enhancement are thus avoided.
- The areas of wasteful expenditure can be easily identified and eliminated.
- Departmental budgets are closely linked with corporation objectives.
- The technique can also be used for the introduction and implementation of the system of 'management by objective.' Thus, it cannot only be used for fulfillment of the objectives of traditional budgeting but it can also be used for a variety of other purposes.

5 d.

Budgeted Hours

40 Employees ×8 Hrs.×5 Days×4 Weeks= 6,400 Hrs.

Actual Hrs. = 6,000 Hrs. (given)

Standard Hrs. for Actual Output = 7,000 Hrs.

Budget No. of Days = 20 Days = 20 Days (4 Weeks x 5 Days)

Actual No. of Days = 20 – 1 = 19 Days

1. Efficiency Ratio $= \frac{\text{Standard Hrs}}{\text{Actual Hrs}} \times 100 = \frac{7{,}000 \text{ hours}}{6{,}000 \text{ hours}} = 116.67\%$

2. Activity Ratio $= \frac{\text{Standard Hrs}}{\text{Budgeted Hrs}} \times 100 = \frac{7{,}000 \text{ hours}}{6{,}400 \text{ hours}} \times 100 = 109.375\%$

3. Calendar Ratio $= \frac{\text{Available working days}}{\text{Budgeted working days}} \times 100 = \frac{19 \text{ days}}{20 \text{ days}} \times 100 = 95\%$

4. $\text{Standard Capacity Usage Ratio} = \frac{\text{Budgeted Hours}}{\text{Max. possible hours in the budgeted period}} \times 100$

$$= \frac{6{,}400 \text{ hours}}{8{,}000 \text{ hours}} \times 100 = 80\%$$

5. Actual Capacity Usage Ratio $= \frac{\text{Actual Hours worked}}{\text{Max. possible working hours in a period}} \times 100$

$$= \frac{6{,}000 \text{ hours}}{8{,}000 \text{ hours}} \times 100 = 75\%$$

6. Actual Usage of Budgeted Capacity Ratio $= \frac{\text{Actual working Hours}}{\text{Budgeted Hours}} \times 100$

$$= \frac{6{,}000 \text{ hours}}{6{,}400 \text{ hours}} \times 100 = 93.75\%$$

SAP 2(ii) Inter New Law Answer key

1.a

Under Section 114(2) of the Companies Act, 2013, for a valid special resolution to be passed at a meeting of members of a company, the following conditions need to be satisfied:

(i) The intention to propose the resolution, as a special resolution must have been specified in the notice calling the general meeting or other intimation given to the members;

(ii) The notice required under the Companies Act must have been duly given of the general meeting;

(iii) The votes cast in favour of the resolution (whether by show of hands or electronically or on a poll, as the case may be) by members present in person or by proxy or by postal ballot are not less than 3 times the number of votes, if any, cast against the resolution by members so entitled and voting.

Thus, in terms of the requisite majority, votes cast in favour have to be compared with votes cast against the resolution. Abstentions or invalid votes, if any, are not to be taken into account.

Accordingly, in the given problem, the votes cast in favour (20) being more than 3 times of the votes cast against (5), and presuming other conditions of Section 114(2) are satisfied, the decision of the Chairman is in order.

1.b

In the given case the Articles of the company provide for 15 members personally present to form the quorum of a general meeting.In determining the quorum, members personally present or deemed to be personally present shall be counted only. In the present case therefore, the present members counted will be 13 + 2 (the person representing two member companies will be counted as 2 and not as 1) = 15. Hence, the quorum is present and the meeting can be validly held.

2.

I. **Rectification by Central Government in register of charges :** Section 87 of the Companies Act, 2013 empowers the Central Government to make rectification in register of charges. According to the provision—

(1) The Central Government on being satisfied that—

(i) (a) **the omission to file with the Registrar the particulars of any charge** created by a company or any charge subject to which any property has been acquired by a company or any modification of such charge; or

(b) **the omission to register any charge within the time** required under this Chapter or the omission to give intimation to the Registrar of the payment or the satisfaction of a charge, within the time required under this Chapter; or

(c) **the omission or mis-statement of any particular** with respect to any such charge or modification or with respect to any memorandum of satisfaction or other entry made in pursuance of section 82 or section 83,

- was accidental or due to inadvertence or some other sufficient cause or it is not of a nature to prejudice the position of creditors or shareholders of the company; or

(ii) **on any other grounds,** it is just and equitable to grant relief,

-it may on the application of the company or any person interested and on such terms and conditions as it may seem to the Central Government just and expedient, direct that the time for the filing of the particulars or for the registration of the charge or for the giving of intimation of payment or satisfaction shall be extended or, as the case may require, that the omission or mis-statement shall be rectified.

(2) Where the Central Government extends the time for the registration of a charge, the order shall not prejudice any rights acquired in respect of the property concerned before the charge is actually registered.

II. **Condonation of delay and rectification of register of charges.** According to Rule 12 of *the Companies (Registration of Charges) Rules, 2014 :*

(1) Where the instrument creating or modifying a charge is not filed within a period of 300 hundred days from the date of its creation (including acquisition of a property subject to a charge) or modification and where the satisfaction of the charge is not filed within 30 days from the date on which such payment of satisfaction, the Registrar shall not register the same unless the delay is condoned by the Central Government.

(2) The application for condonation of delay and for such other matters covered in sub-clause (a), (b) and (c) of clause (i) of sub-section (1) of section 87 of the Act shall be filed with the Central Government along with the fee.

(3) The order passed by the Central Government under section 87(1) of the Act shall be required to be filed with the Registrar along with the fee as per the conditions stipulated in the said order.

3.

According to section 92(4) of the Companies Act, 2013, every company shall file with the Registrar a copy of the annual return, within sixty days from the date on which the annual general meeting is held or where no annual general meeting is held in any year within sixty days from the date on which the annual general meeting should have been held together with the statement specifying the reasons for not holding the annual general meeting, within the time specified under section 403.

Sub-section (5) of Section 92 also states that if a company fails to file its annual return under sub-section (4), before the expiry of the period specified under section 403 with additional fees, the company shall be punishable with fine which shall not be less than fifty thousand rupees but which may extend to five lakhs rupees and every officer of the company who is in default shall be punishable with imprisonment for a term which may extend to six months or with fine which shall not be less than fifty thousand rupees but which may extend to five lakh rupees, or with both.

In the instant case, the idea of the directors that since the AGM was cancelled, the provisions requiring the company to file annual returns within 60 days from the date of AGM would not apply is incorrect.

In the above case, the annual general meeting of Bazaar Limited should have been held within a period of six months, from the date of closing of the financial year but it did not take place. Thus, the company has contravened the provisions of section 92 of the Companies Act, 2013 for not filing the annual returns and shall attract the penal provisions along with every officer of the company who is in default as specified in Section 92(5) of the Act.

4.a.

(i) **Ordinary Business [Section 102 (2)]:**In accordance with the provision of Companies Act, 2013 as contained in Section 102 (2), the only ordinary business can be transacted at an AGM and comprises of the following business:

(a) Consideration of financial statements and the reports of the Board of Directors and auditors.

(b) Declaration of dividend.

(c) Appointment of Directors in place of those retiring; and

(d) appointment of auditors and fixation of their remuneration.

(ii) **Special Business:** Any other business transacted at the annual general meeting or at any other meeting of the members shall be deemed to be special business.

Ordinary business can be passed by an ordinary resolution. However, special business may be transacted either by passing ordinary resolution or special resolution, depending upon the requirements of Companies Act, 2013.

4.B

Verification of instrument evidencing creation or modification of Charge : A copy of every instrument evidencing any creation or modification of charge and required to be filed with the Registrar in pursuance of section 77, 78 or 79 shall be verified as follows-

(a) where the instrument or deed relates solely to the property situated outside India, the copy shall be verified by a certificate issued either under the seal, if any, of the company, or under the hand of any director or company secretary of the company or an authorised officer of the charge holder or under the hand of some person other than the company who is interested in the mortgage or charge;

(b) where the instrument or deed relates, whether wholly or partly, to the property situated in India, the copy shall be verified by a certificate issued under the hand of any director or company secretary of the company or an authorised officer of the charge holder.

5.

Quorum: Quorum means the minimum number of members who must be present in order to constitute a meeting and transact business thereat. Thus, quorum represents the number of members on whose presence the meeting of a company can commence its deliberations.

Section 103 of the Companies Act, 2013 provides the law with respect to the quorum for the meetings. The said section provides that where the Articles of the company do not provide for a larger number, there the quorum shall depend on number of members as on date of a meeting.

In case of a public company:

(i) five members personally present if the number of members as on the date of meeting is not more than one hundred;

(ii) fifteen members personally present if the number of members as on the date of meeting is more than one thousand but up to five thousand;

(iii) thirty members personally present if the number of members as on the date of the meeting exceeds five thousand;

shall be the quorum for a meeting of the company.

Consequences of no Quorum: If the quorum is not present within half-an-hour from the time appointed for holding a meeting of the company –

(a) the meeting shall stand adjourned to the same day in the next week at the same time and place, or

(b) to such other date and such other time and place as the Board may determine; or

(c) the meeting, if called by requisitions (under section 100), shall stand cancelled.

In the instant case, KMP Limited is a public company with total number of 2750 members, hence atleast 15 members should have been personally present in order to constitute a valid quorum for the Annual General Meeting.

Thus, the meeting shall automatically stand adjourned to the same day in the next week at the same time and place, if the quorum is not present within half –an-hour from the time appointed for holding a meeting of the company. Further, the Board of Directors may decide for such other date and such other time and place, which they may deem fit. Section 103 of the said Act itself provides for automatic adjournment of the meeting to the same day in the next week at the same time and place, rather the Chairman obviating to take a decision on the matter of the meeting. The question of validity of Chairman's decision does not arise.

1 a

CALCULATION OF PV OF CASH INFLOW AFTER TAXES

Let the Cost of Machine be x	
Cash Flow before Tax	3,64,178
Less: Tax @ 40%	(1,45,671)
Cash Flow before Tax Saving on Dep.	2,18,507
Add: Tax Saving on Depreciation [(40 % of x/5)]	0.08x
CFAT	2,18,507 + 0.08x
PV Factor @ 15 %	3.35
PV of CFAT	7,32,000 + 0.268x

(a) Calculation of the Cost of Machine

NPV = PV of CFAT – PV of Cash Outflow

= (7,32,000 + 0.268x) – x

x = 7,32,000 + 0.268x

x = ₹ 7,32,000 / 0.732 = ₹ 10,00,000

Thus, the Cost of Machine is ₹ 10,00,000

(b) Calculation of the Cost of Machine

NPV = PV of CFAT – PV of Cash Outflow

= (7,32,000 + 0.268x) – x

– ₹ 7,32,000 = ₹ 7,32,000 – 0.732 x

x = (₹ 7,32,000 + ₹ 7,32,000)/.732 = ₹ 20,00,000.

$$\text{Equity Shareholders' Funds} = \frac{2,22,000}{74} \times 100 = ₹\ 3,00,000$$

Let Pref. Share Capital be x, Hence, Pref. Dividend = 18% x

$$\text{Return on Shareholders' Funds} = \frac{\text{EAT}}{\text{Shareholders' Funds}} \times 100 = 60\%$$

$$= 2,22,000 + 0.18x\ 3,00,000 + x = 0.6$$

$$2,22,000 + 0.18x = 1,80,000 + 0.6x$$

$$0.42x = 42,000$$

1 b

x = ₹ 1,00,000

Thus, Pref. Share Capital = ₹ 1,00,000

Earning after Tax = ₹ 2,22,000 + ₹ 18,000 = ₹ 2,40,000

Tax = 50% of EBT *or* 100% of EAT = ₹ 2,40,000

EBT = EAT + Tax = ₹ 2,40,000 + ₹ 2,40,000 = ₹ 4,80,000

Let 15% Debentures be y

Interest = 0.15 y

EBIT = EBT + Interest on Long-term Debt

EBIT = 4,80,000 + 0.15 y

$$\text{Return on Capital Employed} = \frac{\text{EBIT}}{\text{Capital Employed}} \times 100$$

= 4,80,000 + 0.15 y4,00,000 + y = 0.5

4,80,000 + 0.15y = 2,00,000 + 0.5y

0.35y = 2,80,000

y = ₹ 8,00,000

Thus, 15% Debentures = ₹ 8,00,000

Capital Employed = Shareholders' Funds + Long-term Debts

= (₹ 3,00,000 + ₹ 1,00,000) + ₹ 8,00,000

= ₹ 12,00,000

Working Capital = Capital Employed – Net Fixed Assets

= ₹ 12,00,000 – ₹ 9,00,000 = ₹ 3,00,000

or, CA – CL = ₹ 3,00,000

$$\text{Current Ratio} = \frac{\text{CA}}{\text{CL}} = 2{:}1 \quad \text{... Eq. I}$$

or, CA – 2CL = 0 ... Eq. II

Subtracting Eq. II from Eq. I

CL = ₹ 3,00,000

CA = ₹ 3,00,000 × 2 = ₹ 6,00,000

Total Assets = Fixed Assets + Current Assets

= ₹ 9,00,000 + ₹ 6,00,000 = ₹ 15,00,000

EBIT = ₹ 4,80,000 + 15% of ₹ 8,00,000

= ₹ 6,00,000

$$\text{Return on Total Assets} = \frac{\text{Earnings before Interest \& Tax}}{\text{Total Assets}} \times 100$$

$$= \frac{₹\ 6,00,000}{₹\ 15,00,000} \times 100 = 40\%$$

BALANCE SHEET AS AT .....

[₹ *in lakhs*]

Liabilities	₹	*Assets*	₹
Equity Share Holders' Funds	3	Fixed Assets	9
Preference Share Capital	1	Current Assets	6
15% Debentures	8		
Current Liabilities	3		
	15		15

2 a.

Calculation of Cost of the Machine

Beginning of Year	Cl. Balance at the beginning	Installment	Interest	Principal component
5	0	1,78,858	21,965	1,56,893
4	1,56,893	1,78,858	41,233	1,37,625
3	2,94,518	1,78,858	58,134	1,20,724
2	4,15,242	1,78,858	72,960	1,05,898
1	5,21,140	1,78,858	0	1,78,858
		Total		6,99,998

Cost of the machine is ₹ 6,99,998

Alternatively it can be computed as follows:

$$\text{Annual Payment} = \frac{\text{Cost of Machine}}{\text{PVAF}(14\%, 0-4)}$$

$$1,78,858 = \frac{\text{Cost of Machine}}{3.91371}$$

Cost of Machine = 6,99,998

Year	Total Payment	Interest	Principal component	Principal Outstanding
0	1,78,858	0	1,78,857	5,21,139
1	1,78,858	72,959	1,05,899	4,15,240
2	1,78,858	58,134	1,20,725	2,94,516
3	1,78,858	41,232	1,37,626	1,56,890
4	1,78,858	21,964	1,56,894	0
Total			6,99,997	

Buying Option

$$\text{Depreciation per annum} = \frac{₹\,6,99,998 - ₹\,24,998}{5} = \frac{₹\,6,75,000}{5}$$

Depreciation per annum = ₹ 1,35,000

Tax Saving on interest & Depreciation

Year	Interest (₹)	Dep. (₹)	Total (₹)	Tax Saving (₹)
1	72,960	1,35,000	2,07,960	83,184
2	58,134	1,35,000	1,93,134	77,254
3	41,233	1,35,000	1,76,233	70,493
4	21,965	1,35,000	1,56,965	62,786
5	0	1,35,000	1,35,000	54,000

Present Value of Out flow

Year	Installment (₹)	Tax Saving (₹)	Net outflow (₹)	PV @ 8.4%	P.V. (₹)
0	1,78,858	0	1,78,858	1.0000	1,78,858.00
1	1,78,858	83,184	95,674	0.9225	88,259.26
2	1,78,858	77,254	1,01,604	0.8510	86,465.36
3	1,78,858	70,493	1,08,365	0.7851	85,077.34
4	1,78,858	62,786	1,16,072	0.7242	84,059.40
5	Salvage Value	54,000	-54,000	0.6681	-36,077.00
	P.V. of Outflow				4,86,641.47
			24,998	0.6681	16,701.17
					4,69,940.30

Leasing Option

Lease Rent 25% of ₹ 6,99,998 i.e. ₹ 1,74,999.50 app. ₹ 1,75,000

Lease Rent payable at the end of the year

Year	Lease Rental (₹)	Tax Saving (₹)	Net outflow (₹)	PV @ 8.4%	P.V. (₹)
1-5	1,75,000	70,000	1,05,000	3.9509	4,14,844.50

Decision – The company is advised to opt for leasing as the total PV of cash outflow is lower by ₹ 55,095.80

2 b.

Answer

(i) Cost of Project 'M'

At 15% internal rate of return (IRR), the sum of total cash inflows = cost of the project i.e initial cash outlay

Annual cash inflows = ₹ 60,000

Useful life = 4 years

Considering the discount factor table @ 15%, cumulative present value of cash inflows for 4 years is 2.855 (0.869 + 0.756 + 0.658 + 0.572)

Hence, Total Cash inflows for 4 years for Project M is

₹ 60,000 × 2.855 = ₹ 1,71,300

Hence, Cost of the Project = ₹ 1,71,300

(ii) Payback Period

$$\text{Payback period} = \frac{\text{Cost of the Project}}{\text{Annual Cash Inflows}} = \frac{₹\,1,71,300}{₹\,60,000} = 2.855 \text{ years}$$

(iii) Cost of Capital

$$\text{Profitability index} = \frac{\text{Sum of Discounted Cash inflows}}{\text{Cost of the Project}}$$

$$1.064 = \frac{\text{Sum of Discounted Cash inflows}}{₹\ 1,71,300}$$

$\therefore$ Sum of Discounted Cash inflows = ₹ 1,82,263.20

Since, Annual Cash Inflows = ₹ 60,000

$$\text{Hence, cumulative discount factor for 4 years} = \frac{₹\ 1,82,263.20}{₹\ 60,000}$$

From the discount factor table, at discount rate of 12%, the cumulative discount factor for 4 years is 3.038 (0.893 + 0.797 + 0.712 + 0.636)

Hence, Cost of Capital = 12%

(iv) Net Present Value (NPV)

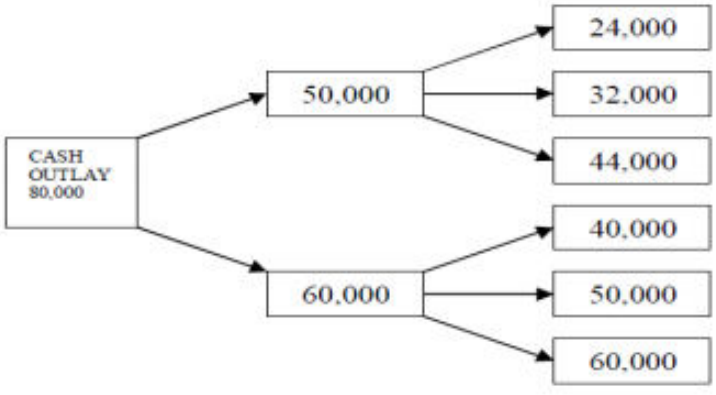
NPV = Sum of Present Values of Cash inflows – Cost of the Project

= ₹ 1,82,263.20 – ₹ 1,71,300 = ₹ 10,963.20

Net Present Value = ₹10,963.20

3 a.

(i) The decision tree diagram is presented in the chart, identifying various paths and outcomes, and the computation of various paths/outcomes and NPV of each path are presented in the following tables:



Path No.	Joint probability Year 1 x year 2
1	.08
2	0.12
3	0.20
4	0.24
5	0.30
6	0.06
	1.00

The Net Present Value (NPV) of each path at 10% discount rate is given below:

Path	*Year 1 Cash Flows* (₹)	*Year 2 Cash Flows* (₹)	*Total Cash Inflows (PV)* (₹)	*Cash Inflows NPV* (₹)	(₹)
1	50,000×.909 = 45,450	24,000×.826 = 19,824	65,274	80,000	(–) 14,726
2	45,450	32,000×.826 = 26,432	71,882	80,000	(–) 8,118
3	45,450	44,000×.826 = 36,344	81,794	80,000	1,794
4	60,000×.909 = 54,540	40,000×.826 = 33,040	87,580	80,000	7,580
5	54,540	50,000×.826 = 41,300	95,840	80,000	15,840
6	54,540	60,000×.826 = 49,560	1,04,100	80,000	24,100

Statement showing Expected Net Present Value

₹

z	*NPV(₹)*	*Joint Probability*	Expected NPV
1	–14,726	0.08	–1,178.08
2	–8,118	0.12	–974.16
3	1,794	0.20	358.80
4	7,580	0.24	1,819.20
5	15,840	0.30	4,752.00
6	24,100	0.06	1,446.00
			6,223.76

(ii) If the worst outcome is realized the project will yield NPV of – ₹ 14,726. The probability of occurrence of this NPV is 8% and a loss of ₹ 1,178 (path 1).

(iii) The best outcome will be path 6 when the NPV is at ₹ 24,100. The probability of occurrence of this NPV is 6% and a expected profit of ₹ 1,446.

(iv) The project should be accepted because the expected NPV is positive at ₹ 6,223.76 based on joint probability.

3 b

SOLUTION

Capital sum to be placed under Lease

	₹ in lakhs	
Cash Down price of machine	300.00	
Less: Present value of depreciation Tax Shield		
$100 \times .35 \times \frac{1}{(1.10)}$	31.82	
$100 \times .35 \times \frac{1}{(1.10)^2}$	28.93	
$100 \times .35 \times \frac{1}{(1.10)^3}$	26.30	87.05
		212.95

If the normal annual lease rent per annum is x, then cash flow will be:

Year	Post-tax cash flow	P.V. of post-tax cash flow
1	$3x \times (1 - .35) = 1.95x$	$1.95x \times (1/1.10) = 1.7727x$
2	$2x \times (1 - .35) = 1.3x$	$1.30x \times [(1/(1.10)^2] = 1.0743x$
3	$x \times (1 - .35) = 0.65x$	$0.65x \times [1/(1.10)^3] = 0.4884x$
		$3.3354x$

Therefore $3.3354X = 212.95$ or $X =$ ₹ 63.8454 lakhs

Year-wise lease rentals:

Year		₹ in lakhs
1	3 x 63.8454 lakhs	= 191.54
2	2 x 63.8454 lakhs	= 127.69
3	1 x 63.8454 lakhs	= 63.85

3 c

Masala Bond	Masala (means spice) bond is an Indian name used for Rupee denominated bond that Indian corporate borrowers can sell to investors in overseas markets. • These bonds are issued outside India but de-nominated in Indian Rupees. • NTPC raised ₹2,000 crore via masala bonds for its capital expenditure in the year 2016.

4 a

(i) Excess reserves are those reserves that the commercial banks hold with the central bank in addition to the mandatory reserve requirements. Excess reserves result in an increase in reserve-deposit ratio of banks; less money for lending reduces money multiplier; money supply declines.

(ii) When people hold more money, it increases the currency-deposit ratio ;reduces money multiplier; money supply declines.

(iii) ATMs let people to withdraw cash from the bank as and when needed, reduces cost of conversion of deposits to cash and makes deposits relatively more convenient. People hold less cash and more deposits, thus reducing the currency-deposit ratio; increasing the money multiplier causing the money supply to increase

(iv) See iii) above

(v) If people, for any reason, are expected to withdraw money from ATMs with more frequency, then banks will want to keep more reserves. This will raise the reserve ratio, and lower the money multiplier. As a result money supply will decline

(vi) If banks decides to keep 100% reserves, then the Money multiplier = 1/required reserve ratio = 1/100% = 1. No additional money supply as there is no credit creation

(vii) If the required reserve ratio is 0 %, then money multiplier is infinite and there will be unlimited money creation. There will be chaos with spiraling prices as money supply is too much and real output cannot increase.

4 b.

(d) When a fertilizer plant dumps effluents into a river, there is negative externality because it adversely affects the quality of water and reduces the welfare of the people who use it. The users of polluted water are third parties and are not in any way connected with the economic transactions that take place within the fertilizer factory. The fertilizer producer does not bear the true cost of wastewater to the society and the fertilizer prices do not include the costs borne by these third parties. Therefore, the fertilizer producer will have an incentive to produce too much effluents. The price of fertilizer which is equal to the marginal cost of production will be lower than what it would be if the cost of production reflected the effluent cost also.

5 a.

(i) Difference between Liquidity Adjustment Facility (LAF) and Marginal Standing Facility (MSF).

Liquidity Adjustment Facility (LAF) which was introduced by RBI in June, 2000, is a facility extended to the scheduled commercial banks and primary dealers to avail of liquidity in case of requirement on an overnight basis against the collateral of government securities including state government securities. Its objective is to assist banks to adjust their day to day mismatches in liquidity. Currently, the RBI provides financial accommodation to the commercial banks through repos / reverse repos under LAF.

Marginal Standing Facility (MSF) which was introduced by RBI in its monetary policy statements 2011 -12, refers to the facility under which scheduled commercial banks can borrow additional amount of overnight money from the central bank over and above what is available to them through the LAF window by dipping into their Statutory Liquidity Ratio (SLR) portfolio up to a limit at a penal rate of interest. This provides a safety valve against unexpected liquidity shocks to the banking system. The MSF would be the last resort for banks once they exhaust all borrowing options including the liquidity adjustment facility.

5 b.

Features of public goods

- Public goods yield utility and their consumption is essentially collective in nature.
- Public goods are non rival in consumption i.e. consumption of a public good by one individual does not reduce the quality or quantity available for all other individuals
- Public goods are non-excludable i.e. consumers cannot (at least at less than prohibitive cost) be excluded from consumption benefits
- Public goods are characterized by indivisibility, each individual may consume all of the good i.e. the total amount consumed is the same for each individual.
- Once a public good is provided, the additional resource cost of another person consuming the good is zero. No direct payment by the consumer is involved in the case of pure public goods and these goods are generally more vulnerable to issues such as externalities, inadequate property rights, and free rider problems
- Competitive private markets will fail to generate economically efficient outputs of public goods. E.g. national defence.

5 c.

(i) Modified Equation of Exchange

$MV + M' V' = PT$

$MV + M' V' = PT$ is an extended form of the original equation of exchange which Fisher gave to include demand deposits (M') and their velocity (V') in the total supply of money. The equation can also be rewritten as $P = (MV + M' V') / T$

From the above equation, it is evident that the price level is determined by the following factors: (i) Quantity of money in circulation (M), (ii) the velocity of circulation of money (V), (iii) the volume of credit money (M'), the velocity of circulation of credit money (V') and the volume of trade (T).

The equation of exchange further shows that the price level (P) is directly related to M, V, M' and V'. It is, however, inversely related to T. Velocity of money in circulation (V) and the velocity of credit money (V') remain constant. Since full employment prevails and since T is function of national income the volume of transactions T is fixed in the short run.

The total volume of transactions (T) multiplied by the price level (P) represents the demand for money. The demand for money (PT) is equal to the supply of money (MV + M'V'). In any given period, the total value of transactions made is equal to PT and the value of money flow is equal to MV+ M'V'.

5 d.

Objectives vary from country to country- achievement and maintenance of full employment, maintenance of price stability, acceleration of the rate of economic development, and equitable distribution of income and wealth

6 a.

(a) The positive externality argument provides justification for government participation in education and healthcare provision. Positive externalities arise when an external benefit is generated by the producer of a good or service, but the producer cannot get compensated for producing this extra benefit because of the absence of a market for the externality. The market price of the good or service will not reflect its accurate worth and markets will produce less than optimal quantity.

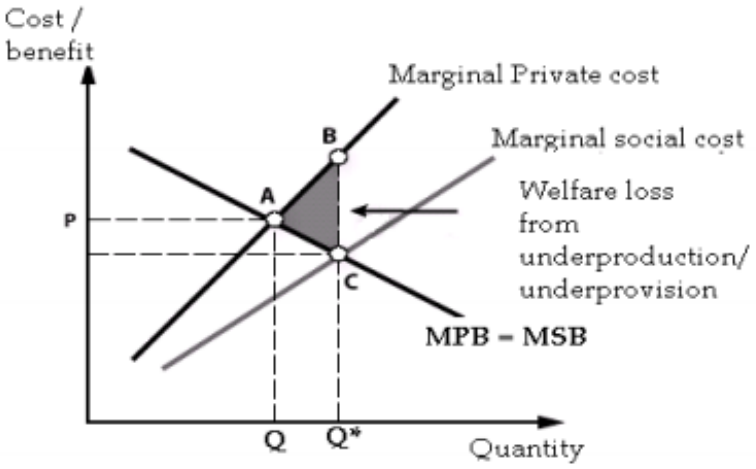
Healthcare and education, especially in developing countries, are very important considering their ability to improve the quality of human capital. An educated workforce is an asset to the society. Education increases not only the productivity of the person being educated but also the productivity of his co-workers. Education increases community engagement and contributes to the formation of a stable and democratic society. Similarly, there are productivity spillovers from health. These are merit goods which are considered socially desirable and beneficial to society irrespective of the preferences of consumers and therefore government deems that their consumption should be encouraged. In contrast to pure public goods, merit goods are rival, excludable, limited in supply,

rejectable by those unwilling to pay, and involve positive marginal cost for supplying to extra users. Scarcity of resources in developing countries and lack of information and awareness regarding the positive benefits of these services may discourage people from making investment decisions to incur costs today for benefits received in the future. Consequently, sufficient market demand for these services may not be forthcoming at a market determined price.

Substantial positive externalities are involved in the consumption of merit goods such as education and healthcare. The greater reliance on private delivery of health infrastructure and health services therefore means that overall these will be socially underprovided by private agents. Adequate access may also be denied to the poor who lack ability to pay. This in turn has undesirable outcomes not only for the affected population but for society as a whole. It adversely affects current social welfare and labour productivity, and of course harms future growth and development prospects.

Healthcare and education can be provided through market, but these are likely to be under-produced and under-consumed through the market mechanism so that social welfare will not be maximized. Left to market, only private benefits and private costs would be reflected in the price paid by consumers. This means, compared to what is socially desirable, people would consume inadequate quantities. The following diagram will show the market outcome for merit goods.

Market Outcome for Merit Goods



In the absence of government intervention, the output of the healthcare and education would be Q where the marginal private cost (MPC) is equal to marginal private benefit (MPB). The welfare loss

to the society due to under production and under consumption is the shaded area (ABC). On account of considerable positive externalities, the optimal output is Q* at which marginal social (MSC) cost is equal to marginal social benefit (MSB). These arguments support a strong case for government intervention in the case healthcare and education.

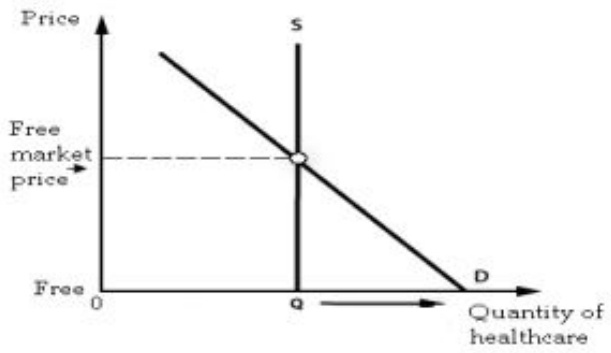
The additional reasons for government provision of these merit goods are:

- Information failure is widely prevalent with merit goods and therefore individuals may not act in their best interest because of imperfect information.
- Equity considerations demand that merit goods such as health and education should be provided free on the basis of need rather than on the basis of individual's ability to pay.
- There is a lot of uncertainty as to the need for merit goods E.g. health care. Due to uncertainty about the nature and timing of healthcare required in future, individuals may be unable to plan

their expenditure and save for their future medical requirements. The market is unlikely to provide the optimal quantity of health care when consumers actually need it, because they may be short of the necessary finances to pay the market price.

The possible government responses to under-provision of merit goods are regulation, subsidies, direct government provision and a combination of government provision and market provision. Regulation determines how a private activity may be conducted. For example, the way in which education is to be imparted is government regulated. Governments can set standards and issue mandates making others oblige. Compulsory immunization may be insisted upon as it helps not only the individual but also the society at large. Government could also use legislation to enforce consumption of a good which generates positive externalities. The Right of Children to Free and Compulsory Education Act, 2009 which mandates free and compulsory education for every child of the age of six to fourteen years is another example. A variety of regulatory mechanisms may also be set up by government to enhance consumption of merit goods and to ensure their quality.

When governments provide these merit goods, apart from generating substantial positive externalities it may give rise to large economies of scale and productive efficiency.



When merit goods are directly provided free of cost by government, there will be substantial demand for the same. As can be seen from the following diagram, when people are required to pay the free market price, people would consume only OQ quantity of healthcare. If provided free at zero prices or at prices lower than market determined prices, the demand OD far exceeds supply.

6 b.

The Credit Multiplier also referred to as the deposit multiplier or the deposit expansion multiplier, describes the amount of additional money created by commercial bank through the process of lending the available money it has in excess of the central bank's reserve requirements. It is the reciprocal of the required reserve ratio. If reserve ratio is 20%, then credit multiplier = 1/0.20 = 5.

$$\text{Credit Multiplier} = \frac{1}{\text{Required Reserve Ratio}}$$

6 c.

- At the extreme, government may enforce complete ban on a demerit good. e.g. Intoxicating drugs. In such cases, the possession, trading or consumption of the good is made illegal.
- Through persuasion which is mainly intended to be achieved by negative advertising campaigns which emphasize the dangers associated with consumption of demerit goods.
- Through legislations that prohibit the advertising or promotion of demerit goods in whatsoever manner.
- Strict regulations of the market for the good may be put in place so as to limit access to the good, especially by vulnerable groups such as children and adolescents.
- Regulatory controls in the form of spatial restrictions e.g. smoking in public places, sale of tobacco to be away from schools, and time restrictions under which sale at particular times during the day is banned.

SAP 2(ii) Inter New Enterprise Information System and Strategic Management Answer key

1 A.

4.8.6 Bring Your Own Device (BYOD)

BYOD (Bring Your Own Device) refers to business policy that allows employees to use their preferred computing devices, like smart phones and laptops for business purposes. It means employees are welcome to use personal devices (laptops, smart phones, tablets etc.) to connect to the corporate network to access information and application. The BYOD policy has rendered the workspaces flexible, empowering employees to be mobile and giving them the right to work beyond their required hours. The continuous influx of readily improving technological devices has led to the mass adoption of smart phones, tablets and laptops, challenging the long-standing policy of working on company-owned devices. Though it has led to an increase in employees' satisfaction but also reduced IT desktop costs for organizations as employees are willing to buy, maintain and update devices in return for a one-time investment cost to be paid by the organization.

In the early 1990s, executing different tasks necessitated the use of different devices. For instance, an mp3 player was needed to listen to music; whereas chores, tasks and schedules were tracked by a PDA. An addition to this, list was a bulky laptop and a camera and it seemed waiting till eternity that we would ever have a single device to suit our different needs. However, remarkable advances in technology in the last decade have made it possible to perform all the above mentioned tasks using a single hi-tech device. Different technologies can work in synergy with each other, which improves user productivity and convenience.

1 B.

4.8.8 Internet of Things (IoT)

I. **Definition:** The **Internet of Things (IoT)** is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. For example:

(i) Washing machines with Wi-Fi networking capabilities can connect themselves to home Wi-Fi. Once these machines are so connected, they can be controlled through machine manufacturer mobile APP from anywhere in the world.

(ii) India's living legend of cricket appearing in an Advertisement for water purifier informs that, the water purifier is Wi-Fi enabled. When the purifying agents deplete in the machine, it connects to home Wi-Fi and informs the service agents of the company.

All above examples are from products being sold in India.

2 A.

In computing, **Virtualization** means to create a virtual version of a device or resource, such as a server, storage device, network or even an operating system where the framework divides the resource into one or more execution environments. Virtualization refers to technologies designed to provide a layer of abstraction between computer hardware systems and the software running on them. By providing a logical view of computing resources, rather than a physical view; virtualization allows its' users to manipulate their systems' operating systems into thinking that a group of servers is a single pool of computing resources and conversely, allows its users to run multiple operating systems simultaneously on a single machine.

2 B.

Definition: Intelligence, as defined in Chambers dictionary; "The ability to use memory, knowledge, experience, understanding, reasoning, imagination and judgement to solve problems and adapt to new situations". The ability described above when exhibited by machines is called as **Artificial intelligence (AI)**. It is intelligence exhibited by machines. For example:

i. This technology is being used in autonomous vehicles, the google car.

ii. Apple online assistant Siri is supposed to use it.

3

4.7.3 Drawbacks of Digital Payments

Every coin has two sides so as the digital payments. Despite many advantages, digital payments have a few drawbacks also.

(i) **Difficult for a Non-technical person:** As most of the digital payment modes are based on mobile phone, the internet and cards. These modes are somewhat difficult for non-technical persons such as farmers, workers etc.

(ii) **The risk of data theft:** There is a big risk of data theft associated with the digital payment. Hackers can hack the servers of the bank or the E-Wallet a customer is using and easily get his/her personal information. They can use this information to steal money from the customer's account.

(iii) **Overspending:** One keeps limited cash in his/her physical wallet and hence thinks twice before buying anything. But if digital payment modes are used, one has an access to all his/her money that can result in overspending.

4.

The Airlines industry faces stiff competition. However, Luxury Jet has attempted to create a niche market by adopting focused differentiation strategy. A focused differentiation strategy requires offering unique features that fulfil the demands of a narrow market.

Luxury Jet compete in the market based on uniqueness and target a narrow market which provides business houses, high net worth individuals to maintain strict schedules. The option of charter flights provided several advantages including, flexibility, privacy, luxury and many a times cost saving. Apart from conveniences, the facility will provide time flexibility. Travelling by private jet is the most comfortable, safe and secure way of flying your company's senior business personnel.

Chartered services in airlines can have both business and private use. Personalized tourism packages can be provided to those who can afford it.

5 A.

A number of cost elements affect the relative attractiveness of generic strategies. A successful cost leadership strategy usually permeates the entire firm, as evidenced by high efficiency, low overhead cost, and waste reduction. The low cost leadership should be such that no competitors are able to imitate so that it can result in sustainable competitive advantage to the cost leader firm.

5 B.

Best-cost provider strategy: Best-cost provider strategy involves providing customers more value for the money by emphasizing low cost and better quality difference. It can be done:

(a) through offering products at lower price than what is being offered by rivals for products with comparable quality and features or

(b) charging similar price as by the rivals for products with much higher quality and better features.

6 A.

(i) Large base of customers of an organization (supplier) may increase its bargaining power in comparison to the bargaining power of the customer.

(ii) The manufacturer of sports goods would be in better position amongst existing competitors since it has advantage of economies of scale. Even the threat of new entrants gets reduced.

6 B.

Cost leadership emphasizes producing standardized products at a very low per-unit cost for consumers who are price-sensitive. Differentiation is a strategy aimed at producing products and services considered unique industry wide and directed at consumers who are relatively price-insensitive.

A primary reason for pursuing forward, backward, and horizontal integration strategies is to gain cost leadership benefits. But cost leadership generally must be pursued in conjunction with differentiation. Different strategies offer different degrees of differentiation. A differentiation strategy should be pursued only after a careful study of buyers' needs and preferences to determine the feasibility of incorporating one or more differentiating features into a unique product. A successful differentiation strategy allows a firm to charge a higher price for its product and to gain customer loyalty.