KE2 – MCQs and Short Answer Questions

Question 01

You are required to choose the most appropriate answer.

1.1   Which expenditure of the following would be classified under indirect labour cost?

(a)   Assembly workers in an automobile manufacturing company;
(b)   Masons in a construction company;
(c)   Stores assistants in a factory warehouse of a garment company;
(d)   Machine operators in a tire manufacturing company;

1.2   Which expenditure of the following would be classified under fixed cost of a garment factory?

(a)   Total salary of sewing machines operators;
(b)   Total monthly rental of the factory premises;
(c)   Cost of fabrics purchased;
(d)   Total salary of quality checkers;

1.3   The following are given in relation to a frequency distribution;
$\sum f = 50$, $\sum fx = 1,610$, $\sum(fx)^2 = 61,250$.
The mean, variance and standard deviation of this frequency distribution are;

(a)   50.00, 1,225.00 and 35.00;
(b)   32.20, 188.16 and 13.72;
(c)   32.20, 1,225.00 and 35.00;
(d)   32.20, 1,225.00 and 2.80;

1.4   Which of the following is not a true statement?

(a)   Ideal standards are based on perfect operating conditions and always tend to generate adverse variances.
(b)   The basic variances are being altered frequently and therefore they are up-to-date;
(c)   Current standards are set based on prevailing working conditions and do not attempt to improve on current level of efficiency;
(d)   Variances from ideal standards are useful for pinpointing areas where a close examination might result in large cost saving;

1.5 A company is contemplating an investment project which yields the following three possible outcomes;

Outcome	Probability of occurrence	Present Value of Profit/(Loss) (Rs. million)
Optimistic	20%	30
Most likely	70%	20
Pessimistic	10%	(5)

Expected present value of profit/ (loss) from this investment project is;

(a) Rs. 15 million;
(b) Rs. 45 million;
(c) Rs. 20 million;
(d) Rs. 19.5 million;

1.6 A company invests its excess funds in a fixed deposit which earns 8% per annum. The interest income is compounded to the deposit every month-end. The effective annual rate (EAR) of interest of this deposit is;

(a) 8.30%;
(b) 8.00%;
(c) 8.50%;
(d) 9.00%;

1.7 Which of the following is not a reason for material usage variance?

(a) Change of delivery costs
(b) Defects in machinery and equipment
(c) Negligence and carelessness in the handling and use of materials
(d) Use of non- standard material mix

1.8 A product is priced (display price) at Rs. 1,250. When the product is sold a discount of 12% is given on the display price. The value excluding the discount has been calculated by adding a mark-up of 33 1/3% to the cost. The cost of the product to the nearest Rupee is:

(a) Rs. 733
(b) Rs. 825
(c) Rs. 938
(d) Rs. 1,050

1.9   Which of the following is incorrect in relation to budgets?

   (a)   A flexible budget takes in to account fixed, variable and semi variable costs
   (b)   Master budget is the final cash budget
   (c)   The budget for principal key factor is prepared first and all other budgets follow
   (d)   A budget is prepared for a specified period which could be any length of time

1.10   A company is considering an investment which will earn Rs. 2 million per annum in perpetuity starting two years from now. The company's cost of capital (discounting rate) is 15% per annum.

   The maximum amount advisable to invest now in this project is;

   (a)   Rs. 13.33 million
   (b)   Rs. 4.00 million
   (c)   Rs. 10.08 million
   (d)   Rs. 11.59 million

Question 02

> You are required to provide short answers/calculations to all questions with attention given to action verbs.

2.1 **Summarise** the key steps involved in Activity Based Costing in relation to overhead absorption.

2.2 A company is considering an investment which will earn Rs. 1million per annum in perpetuity. The company's cost of capital (discounting rate) is 15% per annum.

Required to:
Calculate the maximum amount, advisable to invest in this.

2.3 A company is considering an investment project for Rs. 10million which will earn an annual return of Rs. 3 million for next five years and a residual value of Rs. 5million at the end of fifth year. If the discounting rate of this company is 10%;

Required to:
Calculate the present value of the annual return and the residual value.

2.4 **Summarise** the objectives of material control.

2.5 The following information is given for product Q.
Demand function: P = 1,500 – 0.02Q
(P represents Price per unit of product Q and Q represents the quantity of product Q to be sold)
Total cost function: TC = 200,000 + 500Q
(TC represents Total Cost and Q represents the quantity to be manufactured)

Required to:
Calculate the profit maximizing price and quantity for product Q.

2.6 The following information relates to performance of a factory in two months. **Calculate** the variable cost per unit and fixed cost of the factory.

	Month 1	Month 2
Number of units manufactured	1,000	1,200
Total cost (LKR)	75,000	85,000

2.7   Following information is estimated for two products of a company for the next month;

	Product A (Per unit)	Product B (Per Unit)
Direct material cost (Rs.)	250	200
Direct labour cost (Rs.)	125	80
Output (units)	20,000	10,000

Total fixed production cost for these two products for the next month is estimated at Rs. 9 million and would be allocated in 2:1 basis for product A and product B, respectively. The company keeps 20% profit on full cost;

Required to:
Calculate the unit selling price of Product A.

2.8   **Identify** an internally used document and an external document used in each of the following control points in a material control system:

(a)   Procurement (b) Reception (c) Inspection and return of defects

2.9   Ten workers are working in the Casting Division of the factory of a manufacturing company. They work 8 normal hours at a payment of Rs. 100 per labour hour and 2 hours overtime every day at a payment of Rs. 150 per labour hour.

Explain with necessary calculations how labour cost should be charged to jobs done.

2.10 The weekly demand for product X has a mean of 600 units with a variance of 100 units. Demand of any one week is not affected by the sale of previous or subsequent weeks.

Calculate the arithmetic mean, the standard deviation and coefficient of variation for a month. (Assume there are 4 weeks in a month).

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Answer 01

1.1   (c)

1.2   (b)

1.3

Mean = 1610/50 = 32.20

Variance = 61,250/50 - $(32.20)^2$ = 188.16

Standard deviation = $\sqrt{188.16}$ = 13.72

Therefore answer is (b)

1.4   (b)

1.5

Expected outcome is = 30*(20%) + 20*(70%) - 5*(10%) = 19.5 million

Therefore answer is (d)

1.6

EAR = $(1+8\%/12)^{12}$ - 1 = 8.3%

Therefore answer is (a)

1.7   (a)

1.8
The cost is: 1,250 x 88% x 100/133.3 =   825

Therefore answer is (b)

1.9   (b)

1.10   Present value of perpetuity = annuity/discounting rate
          = 2 million/.15 = 13.33million

       Therefore answer is (a)

Answer 02

2.1

Key stages in Activity Based Costing

(a) Identifying the chosen cost objects for which total costs are to be calculated

(b) Identifying the different activities generating overheads

(c) Create cost pools (buckets) relating overheads to the activities

(d) Determine activity cost drivers to relate the overheads collected in cost pools to the cost objects

(e) Calculate the activity cost driver rates

(f) Calculate overhead attributable to each cost objective from each of the cost pools

2.2

Present value of perpetuity = annuity/discounting rate

= 1 million/.15 = **6,666,667**

2.3

Present value of interest (annuity) = annual payment $(1-(1+\text{interest rate})^{-n})$/interest rate

= $(1-(1+.10)-5)/.10$ = 3.7908

Present value on annual income = 3,000,000*3.7908 = 11,372,400

Present value of residual value = 5,000,000*1/1.10^5 = 3,104,607

Total present value = 14,477,007

2.4 Objectives of Material Control

1. Ensure uninterrupted production

2. Provide required quality of materials

3. Minimise wastage and losses of materials

4. Control investment in inventory of materials

2.5

Demand function = P = 1,500 – 0.02Q

Revenue function = R = $1,500Q - 0.02Q^2$

Marginal revenue function = MR = 1,500 - 0.04Q

Total cost function = TC = 200,000 + 500Q

Marginal cost function = MC = 500

Contribution is maximized when MR = MC

Therefore; 500 = 1,500 - 0.04Q

  Q = 25,000 (Optimal quantity)

  P = 1,500 - 0.02*25,000

  P = Rs. 1,000 (Optimal price)

2.6

Variable cost = $\dfrac{85,000 - 75,000}{1,200 - 1,000}$ =Rs. 50

Fixed cost = 75,000 - 50 x 1,000 = Rs. 25,000

2.7

Total fixed production cost (Rs.) =	9,000,000
Fixed for product A (Rs.) =9million/3*2	6,000,000
Fixed production cost per unit (Rs.) =	300.00
Total direct cost (250+125) (Rs.) =	375.00
Full cost per unit (Rs.) =	675.00
Profit margin (20% on full cost) =	135.00
Unit selling price of product A (Rs.) =	**810.00**

2.8

		Internally used document	External document
(a)	Procurement	purchase requisition	purchase order
(b)	Reception	goods received note	delivery note
(c)	Inspection and return of defects	goods inspection note	goods return note

2.9

			Rs.
Normal time (8 hours*10 workers) =	80	at Rs. 100 per hour =	8,000.00
Overtime (2 hours*10 workers)	20	at Rs.150 per hour =	3,000.00
	100		11,000.00

Direct labour rate per labour hour/ gross-up rate per hour
(11,000/100hours)   110.00

All products/jobs done during normal or overtime should be charged at Rs. 110 per labour hour.

2.10

Arithmetic mean = 600*4 = 2,400 units

Standard deviation = $\sqrt{100}*4$ =   40 units

Coefficient of variation = 40/2,400 =   0.02