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| **C:\Users\ADMIN\Desktop\j.png** | **JAIPURIA INSTITUE OF MANAGEMENT, INDORE**  Post Graduate Diploma in Management (Batch 2022-24) |
| **Course Title: Management Accounting and Control (Course Code: 10204)**  **End Term Examination, Term - III (May, 2023)** | |
| **Time Duration : 2 Hours Total Marks: 40** | |

***General Instructions*:**

1. *This is a closed-book examination. Therefore, access to Computers & textbook/course materials are not permitted in the examination hall.*
2. *Use of a calculator, including scientific or financial, is allowed.*
3. *Do not use pencils to answer the questions*
4. *Answers without proper analysis will be treated as incomplete.*
5. *Any academic dishonesty will fetch Zero marks in the examination.*
6. *All the questions below will be answered using the data in the question paper only.*
7. *Present your answers in legible handwriting.*
8. *The exam office will distribute a sheet of the relevant formula.*

**Part A: (16 Marks)**

**Case: KFC *(Breakeven analysis)* SUGGESTED TIME- 20 MINUTES**

KFC currently sells hot dogs. During a typical month, the stand reports a profit of $9,000 with sales of $50,000, fixed costs of $21,000, and variable costs of $0.64 per hot dog.

Next year, the company plans to start selling nachos for $3 per unit. Nachos will have a variable cost of $0.72 and new equipment and personnel to produce nachos will increase monthly fixed costs by $8,808. Initial sales of nachos should total 5,000 units. Most of the nacho sales are anticipated to come from current hot dog purchasers, therefore, monthly sales of hot dogs are expected to decline to $20,000.

After the first year of nacho sales, the company president believes that hot dog sales will increase to $33,750 a month and nacho sales will increase to 7,500 units a month.

**Question 1 A**: Determine the monthly breakeven sales in dollars before adding nachos.

**(3 Marks)**

**Question 1 B:** Determine the monthly breakeven sales during the first year of nachos sales, assuming a constant sales mix of 1 hotdog and 2 units of nachos. **(3 Marks)**

**Case: Sony (ABC) SUGGESTED TIME- 20 MINUTES**

Sony, Inc., manufactures remote controls. Currently the company uses a plant-wide rate for allocating manufacturing overhead. The plant manager believes it is time to refine the method of cost allocation and has the accounting department identify the primary production activities and their cost drivers:

Activities Cost driver Allocation Rate

Material handling Number of parts $2 per part

Assembly Labor hours $20 per hour

Inspection Time at inspection station $3 per minute

The current traditional cost method allocates overhead based on direct manufacturing labor hours using a rate of $200 per labor hour.

**Question 2 A**: What are the indirect manufacturing costs per remote control assuming the traditional method is used and a batch of 500 remote controls are produced? The batch requires 1,000 parts, 10 direct manufacturing labor hours, and 15 minutes of inspection time.

**(2.5 Marks)**

**Question 2 B**: What are the indirect manufacturing costs per remote control assuming an activity-based-costing method is used and a batch of 50 remote controls are produced? The batch requires 100 parts, 6 direct manufacturing labor hours, and 2.5 minutes of inspection time**. (2.5 Marks)**

**Case: Springfield Manufacturing *(Cost determination/Cost classification)***

**SUGGESTED TIME- 20 MINUTES**

Springfield Manufacturing produces electronic storage devices, and uses the following three-part classification for its manufacturing costs: direct materials, direct

manufacturing labor, and indirect manufacturing costs. Total indirect manufacturing costs for January were $300 million, and were allocated to each product on the basis of

direct manufacturing labor costs of each line. Summary data (in millions) for January for the most popular electronic storage device, the Big Bertha, was:

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|  | **Big Bertha** |
| Direct manufacturing costs | $9,000,000 |
| Direct manufacturing labor costs | $3,000,000 |
| Indirect manufacturing costs | $8,500,000 |
| Units produced | 40,000 |

**Question 3 A:** Compute the manufacturing cost per unit for each product produced in January. **(2 Marks)**

**Question 3 B:** Suppose production will be reduced to 30,000 units in February. Speculate as to whether the unit costs in February will most likely be higher or lower than unit costs in January; it is not necessary to calculate the exact February unit cost. Briefly explain your reasoning**.**

**(3 Marks)**

**Part B: Budgeting and Variances (19 Marks)**

**Case: Philips (Budgeting) SUGGESTED TIME- 10 MINUTES**

Philips uses a flexible budget for its indirect manufacturing costs. For 20X5, the company anticipated that it would produce 18,000 units with 3,500 machine-hours and 7,200 employee days. The costs and cost drivers were to be as follows:

**Fixed Variable Cost driver**

Product handling $30,000 $0.40 per unit

Inspection 8,000 8.00 per 100 unit batch

Utilities 400 4.00 per 100 unit batch

Maintenance 1,000 0.20 per machine-hour

Supplies 5.00 per employee day

During the year, the company processed 20,000 units, worked 7,500 employee days, and had 4,000 machine hours. The actual costs for 20X5 were:

**Actual costs**

Product handling $36,000

Inspection 9,000

Utilities 1,600

Maintenance 1,200

Supplies 37,500

**Question 4 A:** Prepare the flexible budget using the overhead items above and then compute the flexible-budget variances. **(4 Marks)**

**Question 4 B**: Analyze the report furnished by you in question 4. **(1 Marks)**

**Case: Nilkamal (Budgeting and Variance) SUGGESTED TIME- 20 MINUTES**

Nilkamal Company produces chairs and has determined the following direct cost categories and budgeted amounts:

**Standard Inputs Standard Cost**

**Category for 1 output per input**

Direct Materials 1.00 $7.50

Direct Labor 0.30 9.00

Direct Marketing 0.50 3.00

Actual performance for the company is shown below:

Actual output: (in units) 4,000

Direct Materials:

Materials costs $30,225

Input purchased and used 3,900

Actual price per input $7.75

Direct Manufacturing Labor:

Labor costs $11,470

Labor-hours of input 1,240

Actual price per hour $9.25

Direct Marketing Labor:

Labor costs $5,880

Labor-hours of input 2,100

Actual price per hour $2.80

**Question 5 A:** What is the price variance of the direct materials? **(2 Marks)**

**Question 5 B:** What is the price variance of the direct manufacturing labor and the direct marketing labor, respectively? **(2 Marks)**

**Question 5 C:** What is the efficiency variance for direct materials? **(2 Marks)**

**Question 5 D:** What are the efficiency variances for direct manufacturing labor and direct marketing labor, respectively? **(2 Marks)**

**Question 5 E:** Please analyze the variances of Nilkamal. **(2 Marks)**

**Case: ABC Company SUGGESTED TIME- 20 MINUTES**

ABC Company has just implemented a new cost accounting system that provides two variances for fixed manufacturing overhead. While the company's managers are familiar with the concept of spending variances, they are unclear as to how to interpret the production-volume overhead variances. Currently, the company has a production capacity of 54,000 units a month, although it generally produces only 46,000 units. However, in any given month the actual production is probably something other than 46,000.

**Question 6 A:** Does the production-volume overhead variance measure the difference between the 54,000 and 46,000, or the difference between the 46,000 and the actual monthly production? Explain**. (2 Marks)**

**Question 6 B:** What advice can you provide the managers that will help them interpret the production-volume overhead variances? **(2 Marks)**

**Part C: Management Control (5 Marks)**

**Case: Birch Paper SUGGESTED TIME- 10 MINUTES**

**Question 7:** Please write a note on transfer pricing. Also, please refer to the Birch Paper case discussed in class and comment. **(5 Marks)**

