

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF ENGINEERING AND PHYSICS

PROGRAMME BACHELOR OF SCIENCE HONOURS DEGREE IN ELECTRONIC ENGINEERING

PEM 5101/PEM4101 (2): PROFESSIONAL ENGINEERING MANAGEMENT

DURATION: 3 HOURS

TOTAL MARKS: 100

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of 3 printed papers and 6 questions.
2. Answer any FOUR questions only.
3. Each question carries 25 marks.
4. Show your steps clearly in any calculation.
5. Start the answers for each question on a fresh page.

NOV 2024

Question 1

Discuss the five steps involved in effective market research. Use examples to illustrate your answer. [25]

Question 2

As a chief engineer for a large organization, you have been approached by a Basket Ball Association to develop a twenty-four seconds clock to be used in regulating ball possession. You are told that the clock should be a down counter, it should ring a buzzer when time is up and that it should be clearly visible from a distance. Give a detailed account of how you would handle the design to the prototype stage. [25]

Question 3

The four P's have been described as an effective framework for developing a Company's marketing plan. Indicate clearly what they are and how they can be used as a marketing tool in the context of Zimbabwe market place. [25]

Question 4

Getting the right person for the job is becoming more and more important in today's technological world. Outline one approach which would help a company achieve this goal. [25]

Question 5

As a Chief Engineer for an upcoming manufacturing company have been asked to design a manufacturing set up for one of your key electronic products and to come up with a range monitoring and control measures for your plant. Give a detailed account of how you would achieve this task. [25]

Question 6

The following is a list of balances from the books for a small engineering firm in Bindura of the year ending December 31, 2022. [25]

Capital	\$30 000
Sales	\$20 000
Opening Stock	\$2 000
Purchases	\$6 000
Closing stock	\$3 000
Wages and Salaries	\$10 000
Rent and Rates	\$500
Travel	\$250
Adverting	\$100
Lighting and Heating	\$150
Office Expenses	\$100
Miscellaneous	\$100
Bank Interest	\$200
Doubtful debts	\$40
Depreciation	\$1 550
Bad Debts	\$10

Prepare the Trading and Loss Account for the year ended December 31, 2022.

END OF PAPER