PROJECT PROPOSAL (SYNOPSIS)

MMPP-001 Project Course | Master of Business Administration (Operations Management), MBAOM

Selective Inventory Control of Maintenance Spares at [a manufacturing unit]: ABC-VED Classification, EOQ and Reorder Levels from Twenty-Four Months of Stores Issue Records

Subject area on the proforma: Operations Management & Information System | Project type: comprehensive case study of one organisation

Cover page detail	Fill in your own
Name of the student	[Your name as on the IGNOU identity card]
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Name and address of the supervisor	[Supervisor who meets the MMPP-001 guide eligibility criteria, official address]
Month and year (optional)	[Month Year]

The Proforma for Approval of Project Proposal (MMPP-001) is a separate IGNOU form with its own boxes: enrolment number, study centre, regional centre, subject area, your name, full postal address and email, topic of the project, name and address of the supervisor, whether the supervisor is an academic counsellor of IGNOU's Management Programme (with the study centre code and courses counselled) and the number of students being guided. The printed Subject Area list reads HRM & OB, Accounting & Finance, Operations Management & Information System, Marketing, Corporate Management and Any Other. Fill every box on the form itself; the Project Proposal No. is assigned by the Regional Centre.

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Read this before anything else

This is a **sample for study reference**. It shows how an inventory synopsis can be built from one unit's own stores records, with a named record, a named formula and a named statistic for each objective. It is not a synopsis to copy, post or submit. Each section is a worked example of structure and reasoning, not text to reuse: read the documents yourself and write every paragraph in your own words. The unit, its items, its figures and every study of your own are left in [square brackets]. Your synopsis must be your own original work, prepared in consultation with your supervisor, and every number in your report must come from records you were permitted to use.

How this file was made. Prepared by the ignoumbaproject.net editorial desk of Shri Chakradhar Publication Pvt. Ltd., New Delhi, in November 2026, with AI-assisted drafting from IGNOU's "MMPP-001: Project Course, Guidelines for Submission of Synopsis and Project Report" (School of Management Studies), Ind AS 2 Inventories, AS 2 Valuation of Inventories and the Companies (Auditor's Report) Order, 2020. In November 2026 the IGNOU rules stated here were checked against the MMPP-001 guidelines, the accounting and audit rules against those texts, and the references against their bibliographic records; the file is published under BK Sahni's editorial responsibility. ignoumbaproject.net is independent and is not affiliated with IGNOU.

What the MMPP-001 guidelines ask the proposal to contain: (i) introduction, (ii) rationale, (iii) objectives, expressed in a neutral manner, (iv) research methodology (research design; nature and source of data; sample and sampling technique with the rationale of the chosen organisation and the sample; tools and their relevance to the objectives; method of data collection; data handling and analysis with the relevance of each statistical tool), and (v) limitation of the proposed project, if any. A comprehensive case study of one organisation is one of the three project types the guidelines name; this sample is one.

What goes with the synopsis: the Proforma for Approval of Project Proposal (MMPP-001), signed and dated by you and your supervisor, one copy of the proposal, and the supervisor's detailed bio-data signed in original (not needed when the supervisor is an approved academic counsellor). Approval is IGNOU's decision, made by its evaluator.

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1. Introduction

A maintenance store holds hundreds of spare parts. A few of them carry most of the money, and a different few stop the plant when they are missing. ABC analysis ranks items by annual consumption value, the annual quantity issued multiplied by the unit cost (a standard definition; see, for example, Silver, Pyke and Thomas, 2017); VED analysis ranks them by criticality, as vital, essential or desirable. Devnani, Gupta and Nigah (2010) applied ABC, VED and a cross-tabulated ABC-VED matrix to a hospital pharmacy store whose drug formulary held 421 items, with criticality decided by a group of clinicians and a pharmacist. Flores and Whybark (1986) proposed a joint criteria matrix within the ABC framework, and Flores and Whybark (1989) reported applying multiple criteria ABC analysis to maintenance inventories in two organisations.

Two accounting points set the scope. AS 2 (paragraph 4) excludes from inventories the spare parts, servicing equipment and standby equipment that meet the definition of property, plant and equipment; such items are not part of this study. For the spares that are inventory, whichever standard the unit's accounts follow, Ind AS 2 (paragraph 9) or AS 2 (paragraph 5), requires measurement at the lower of cost and net realisable value, with cost assigned by FIFO or weighted average for items that are ordinarily interchangeable (Ind AS 2 paragraph 25; AS 2 paragraph 16); neither standard lists LIFO among the permitted formulas.

[Rewrite this background in your own words.] [Add four to six studies on spares inventory, ABC-VED or reorder policy that you have read yourself, with full references, and end with the gap your study fills.]

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2. Rationale of the Study

[State in your own words, in three or four sentences, why stock-outs and idle stock of spares matter to [the unit], and how the question draws on MMPO-006 Materials Management, MMPO-007 Maintenance Management and MMPO-001 Operations Research.] The unit's own item master, issue register, purchase orders and goods received notes let a student study twenty-four months of real decisions without collecting a single opinion on what the stock "should" be.

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3. Objectives of the Study

The MMPP-001 guidelines ask for objectives expressed in a neutral manner, without implicit assumptions about the findings, and print four sample stems: "To study the financial performance", "To explore the", "To analyse the factors affecting" and "To investigate the influence".

(a) To analyse the maintenance spares of [the unit] by annual consumption value (ABC) for [Month Year] to [Month Year].

(b) To study the criticality of the same items (VED) as rated by a stated panel of maintenance and stores staff.

(c) To explore the ABC-VED matrix and the control category of each item.

(d) To investigate the difference between the reorder levels now used by the store and reorder levels computed from recorded demand and lead times.

(e) To explore the relationship between lead-time variability and stock-out events across items.

Hypotheses (if your supervisor asks for them). The MMPP-001 guidelines list no separate hypotheses part. If you add them, write one null hypothesis per test, for example:

H01: The existing and computed reorder levels of the items studied do not differ.

H02: There is no association between the variability of lead time and the number of stock-out events.

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4. Research Methodology

4.1 Research design

A descriptive and analytical case study of the maintenance stores of one unit over twenty-four months, using the unit's own records with written permission. A short rating sheet is used for the VED panel; no consumer or employee questionnaire is used.

4.2 Nature and source of data

Figure needed	Record that holds it	Note
Item code, description, unit, current unit cost, existing reorder level and minimum and maximum levels	Item master in the stores ledger or ERP	Item codes are masked in the report
Quantity issued per month for each item	Issue register or ERP consumption report	24 months, [Month Year] to [Month Year]
Order date and receipt date of each purchase	Purchase orders and goods received notes	Lead time = receipt date minus order date, in days
Stock-out events	Stores stock-out log, or work orders held waiting for a spare	Define a stock-out before counting
Ordering cost per order and carrying rate	Purchase and accounts records, or a stated assumption with its source	Logged in the cost assumption table
Inventory policy and the auditor's stock-count statement	The annual report, if the unit belongs to a company that files one: accounting policy note and, where the Order applies to the company, the CARO paragraph 3(ii) statement	Used as context, not as item data

4.3 Sample and sampling technique, with rationale

Population: every maintenance spare held as inventory with at least one issue in the twenty-four months, [N] items. ABC uses all of them, because ABC is a ranking of the whole list and cannot be run on a sample or on category totals. VED: every item rated by a panel of [three] staff (maintenance in-charge, stores officer, production supervisor) against a written criterion: vital if its absence stops production, essential if it slows or degrades production, desirable if a delay within the lead time does not affect production; the majority rating is used and disagreements are recorded. Lead-time and reorder analysis: items with at least [four] receipts in the period, [n] items. Rationale: [write why this unit, these items and this period answer your question].

4.4 Tools and their relevance to the objectives

Tool	Formula or rule used	Objective
ABC analysis	Annual consumption value = annual quantity issued x unit cost; items sorted in descending order; cumulative share of value; cut-offs near 70, 20 and 10 per cent of value, stated as a convention (Devnani et al. report cut-offs that differed marginally from these)	(a)
VED analysis	Panel rating against the written criterion in 4.3	(b)
ABC-VED matrix	Cross-tabulation of the ABC and VED classes into control categories I, II and III, as defined in the study you follow (Devnani et al., 2010, give one definition)	(c)
Economic order quantity	EOQ = square root of (2 x D x S / H): D annual demand, S ordering cost per order, H annual holding cost per unit (a standard textbook formula; see, for example, Silver et al., 2017)	(d)
Safety stock and reorder level	Safety stock = z x square root of (L x sd(d) squared + d squared x sd(L) squared); reorder level = d x L + safety stock; d and sd(d) daily demand, L and sd(L) lead time in days, z for the service level chosen with the supervisor	(d)
Stock-out count	Events per item per year, by the definition fixed in 4.2	(e)

Reliability and validity: issue-register totals are reconciled with the stores ledger for [three] months chosen at random; lead times longer than [twice the item median] are checked against the purchase file before use; every cost assumption is logged with its source; the VED panel's agreement is reported as the share of items rated the same by all members.

4.5 Method of data collection

Extracts of the item master, issue register, purchase orders and goods received notes taken from [the ERP or registers] between [dates], after the approval letter and under a written permission letter from [designation]. Item codes and supplier names are masked; no price list, drawing or supplier contract is copied into the report.

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4.6 Data handling and analysis, and the relevance of each statistic

Objective	Data	Statistic	Why it fits
(a) ABC	Annual consumption value of [N] items	Ranked table and cumulative curve; share of items and share of value per class	Describes how value is concentrated
(b) VED	Panel ratings of [N] items	Frequency table; panel agreement	Describes criticality and how far the raters agree
(c) matrix	ABC and VED class of each item	Cross-tabulation with counts and value shares	A description; no test is needed
(d) reorder levels	Existing and computed levels for [n] items	Wilcoxon signed-rank test on the paired differences	A paired rank test (Wilcoxon, 1945); it does not assume normal differences, only differences roughly symmetric about their median
(e) lead time and stock-outs	Coefficient of variation of lead time and stock-out count for [n] items	Spearman's rank correlation, read as association only	A rank correlation (Spearman, 1904); counts are small and skewed

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5. Limitations of the Proposed Study

One unit and one store, so the results describe that store only; twenty-four months, which may not cover an item's full failure cycle; ordering and carrying costs that may rest partly on stated assumptions; criticality ratings that are judgements of a small panel; association, not cause, in objective (e). The study does not audit the unit, value its inventory or comment on its accounts.

Proposed chapters (optional): 1 Introduction, review of literature and the unit under study; 2 Research methodology, including the reliability and validity of the data; 3 Results and discussion, in tables and graphs with interpretation; 4 Summary and conclusion; 5 Recommendations; 6 Limitations of the project and direction for further research (the guidelines print "(optional)" after this line); references; annexures (the guidelines name the questionnaire used; for this study our suggestion is the VED rating sheet, the permission letter, the data log and the cost assumption log).

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References

Devnani, M., Gupta, A. K., and Nigah, R. (2010). ABC and VED analysis of the pharmacy store of a tertiary care teaching, research and referral healthcare institute of India. *Journal of Young Pharmacists, 2*(2), 201-205. https://doi.org/10.4103/0975-1483.63170

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Silver, E. A., Pyke, D. F., and Thomas, D. J. (2017). *Inventory and production management in supply chains* (4th ed.). CRC Press.

Spearman, C. (1904). The proof and measurement of association between two things. *The American Journal of Psychology, 15*(1), 72-101.

Wilcoxon, F. (1945). Individual comparisons by ranking methods. *Biometrics Bulletin, 1*(6), 80-83.

[Your own studies on spares inventory, ABC-VED and reorder policy; the IGNOU MMPO-006 and MMPO-007 course blocks you used; any unit document you are permitted to cite, in the same format.]

MMPP-001 sets no referencing style; use one consistent format. Cite each standard and order in the version you read.

Our suggestion, not an IGNOU rule: keep the permission letter, the data log and the cost assumption log as annexures, so an evaluator can see where every figure came from.

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