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of the college of Economics & Management NUST MISIS
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**ENTRANCE EXAMINATION CONTENT
FOR THE MASTER'S DEGREE PROGRAM**

**CODE 38.04.02 Management and Marketing of Technical solutions and
Digital products**

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1. EXPLANATORY NOTE

The purpose of the entrance test is to determine the ability of the incoming student to master the main professional educational programs of higher education within the educational standards of NUST MISIS in the direction «38.04.02 Management and Marketing of Technical Solutions and Digital products ».

The entrance examination for the educational program «38.04.02 Management and Marketing of Technical Solutions and Digital products » is held in the interview format.

Interview time is 45 minutes. The interview is conducted in English to confirm the applicant's professional skills on the chosen profile and related training program. The candidate is asked three questions from the list of topics presented in section 2 of the Program.

The results of the introductory tests are evaluated on a scale of 100. The minimum pass mark for successful completion of the entrance tests is 40.

List of items that the incoming student is entitled to bring to the class during the entrance test: pen, writing in black or blue ink.

2. SECTION CONTENT

Section 1. Economic theory

1. Types of resources in economic theory. The limitlessness of needs and scarcity of resources as fundamental prerequisites of economic science.
2. Production possibilities curves.
3. Types of economic systems and their characteristics. Coordination of choices in different economic systems.
4. Market, its types, functions, structure, conditions of emergence. Market entities and objects.
5. Market economy, conditions of its emergence. Role of the state in a market economy
6. Properties of the product, dual nature of work of the goods producers.
7. Pattern of money. Money functions. The amount of money needed to process goods.
8. The firm as a market agent. Forms of entrepreneurial activity without education and with the formation of a legal entity. Joint stock companies.
9. Human and economy. Human model in economic theory.
10. Main characteristics of industrial and post-industrial society.

Section 2. Microeconomics

1. Demand, supply and market equilibrium. Forms of state intervention in the functioning of market mechanism
2. Elasticity of demand by price. Point elasticity and stretch elasticity on the segment (arc). Cross elasticity. Elasticity of demand by income.
3. Elasticity of the offer to the price. Practical application of elasticity theory.
4. Concept and types of utility. Law of decreasing utility. Consumer equilibrium.
5. Production function. Types of production functions, law of the diminishing return of variable factor. Types of production scale returns.
6. Characteristics of the functioning of enterprises in markets of perfect and imperfect competition.
7. Wages as labor price. The characteristics of trade unions in the labour market. Bilateral monopoly in the labor market.
8. Capital and interest. Investment.
9. Rent as the price of land. Types of rent. Balance in the land market.
10. Concept and types of market failure (failures).

Section 3. Macroeconomics

1. The concept of the System of National Accounts (SNA). Principles of SNA construction. Basic indicators of the national accounts system.
2. Aggregate demand and its structure. Price and non-price factors affecting aggregate demand

3. The Keynesian and Classical models of the aggregate supply
4. Types and phases of economic cycles. Classical and Keynesian cyclical interpretation
5. Macroeconomic equilibrium in the «AD-AS» model. Demand shock. Proposal shock.
6. Currency. Monetary system. Money supply structure. Monetary aggregates.
7. Theoretical approaches to monetary policy. Monetary policy objectives, methods and instruments.
8. The relationship between inflation and unemployment. Phillips Curve.
9. The role of fiscal policy in macroeconomic regulation. Types of fiscal policy.
10. The concept of economic growth. Need, types, factors and indicators of economic growth. Measuring economic growth.

Section 4. Business economics

1. Organizational and legal forms of business organization.
2. Enterprise's capital goods: concept and classification.
3. The nature of depreciation and its methods of accrual.
4. Production capacity of the enterprise.
5. Working capital of the enterprise: concept, composition and structure.
6. Methods for determining the working capital requirement and turnover rates.
7. Intangible assets of the enterprise: concept, characteristics and methods of depreciation.
8. Organization staff, structure and movement. Productivity.
9. The essence and function of price as a factor of economic category, the system of prices and their classification.
10. Main indicators of economic and economic activity of the enterprise: the order of definition.

Section 5. Digital economy

1. The concept of digital economy. Its institutional structure.
2. Causes and conditions of the development of the digital economy.
3. Digital economy and digital transformation.
4. Digital business. Types of business models in the digital economy.
5. Financial technologies in the digital economy.
6. Payment systems and financing methods in the digital economy.
7. The Digital Economy's Infrastructure and Technologies.
8. Government regulation of the digital economy.
9. The Digital State and the Digital Government.
10. Digital risks. Digital security issues.

Section 6. Management Basics

1. System and process of management.
2. The goals, tasks and functions of management in a modern organization.
3. Basic schools of management theory.
4. Internal environment of the organization. Interaction of internal variables.
5. External environment of the organization. Environment of direct and indirect impact.
6. Communication and information in management. Information management process.
7. Organizational structure of management. Typical management structure in industrial enterprises.
8. Development and management decision. Simulation methods.
9. Stages and life cycles of the organization.
10. Quality and effectiveness of management decisions.

Section 7. Basics of production management

1. Basic patterns of industrial companies.
2. Organization of production processes.
3. General and production structure of the industrial enterprise.
4. Planning of the work of the supporting and servicing units of an industrial enterprise.
5. Productivity. Technical labour regulations.
6. Planning of work schedules and pay.
7. Workforce planning of industrial enterprises.
8. Production programme planning.
9. Network planning.
10. Inventory management.

Section 8. Marketing

1. Marketing as a management function. Marketing Concept. Marketing complex «4P», «5P», «7P».
2. Marketing environment of enterprise. Factors of external and internal environment.
3. Marketing research: concept, goals, stages of implementation. Sources and methods of information collection.
4. Market segmentation: concept, main features. Select target segment. Levels of forming the portrait of the target audience.
5. Main aspects of commodity policy. Concept and levels of the product in marketing, classification of products. The life cycle of a product, features of its management by stages. Features of bringing new product to the market.
6. Competitiveness of the product, methods of its evaluation. Product positioning.
7. Price in marketing system. Main objectives of pricing policy, methods and pricing strategies. Types of prices, features of their application.
8. Promotion of the product in the market: concept, goals, types. Main aspects of marketing

policy. Flows in marketing distribution channels.

9. Communication policy in marketing. Development of advertising program: Stages and their content. Advocacy: meaning, content, methods and means.

10. Organization of marketing in the enterprise, its tasks and functions. Types of organizational structure, evaluation of marketing service performance.

Section 9. Financial management basics

1. Place of financial management in the management system of the subject.
2. Sources formation own financial resources of the economic entity.
3. Policy of raising funds by the economic entity. Leverage effect.
4. Lending as alone from financial business facilitation.
5. Management of the assets of the operating entity.
6. Leverage effect.
7. Methods of valuation of investment projects.
8. Characteristics of the main Species financial risks. Sources of financial risks and their assessment.
9. Organization financial management manager subject: content, main directions, financial services.
10. Budgeting in the financial planning system of the subject.

Section 10. Basics of innovation management

1. Innovation economy and innovation management.
2. Current trends and forms of innovative management.
3. Innovation management functions.
4. Types and types of innovation.
5. Sources of innovation.
6. Innovation process. Five steps: problem analysis, idea generation, opportunity identification and evaluation of ideas, innovation development, commercialization of innovation.
7. Innovation life cycle.
8. Strategic areas of innovation.
9. Innovation management strategies.
10. Motivation of the creative activities of staff. Innovative leadership.

3. RECOMMENDED LITERATURE

1. Abramov V. I., Boyko P. A., Osipov V. S., Eriashvili N. D., Turmanidze T. U Financial Management: textbook /. Moscow: Unity-Dana. 2023. 2nd ed., revised and an additional 272 pages . <https://biblioclub.ru/index.php?page=book&id=700164> . Textbook for higher education
2. Aksyanova A.V., A.V. Morozov, V. O. Moiseev, V. R. Galeeva [and others]. Enterprise economics: textbook : [16+] /– Kazan: Kazan National Research Technological University (KNRTU), 2021. – 304 p. – Bibliogr. in the book – ISBN 978-5-7882-3006-1.: ill., tab. – URL: <https://biblioclub.ru/index.php?page=book&id=699807> – date of reference: 12/18/2025.
3. Belyaev Yu. M. Innovation management: textbook / Moscow: Dashkov and Co., 2022. 4th ed., ster. - 219 p. <https://biblioclub.ru/index.php?page=book&id=621843> . A textbook for higher education.
4. Boitsova, E. Y. Economic theory: macroeconomics, microeconomics. Actual problems : textbook and practicum for universities / E. Y. Boitsova, N. K. Voschikova. — 3rd ed., reprint. and add. Moscow : Yurait Publishing House, 2024. 339 p. (Higher education). — ISBN 978-5-534-18817-2. // Yurayt educational platform [website]. — URL: <https://urait.ru/bcode/551728> — date of request: 12/18/2025.
5. Bulatov A. S. [et al.] Macroeconomics: a textbook for universities /; edited by A. S. Bulatov. — 3rd ed., ispr. and add. Moscow : Yurait Publishing House, 2024. 333 p. (Higher education). — ISBN 978-5-534-06407-0.// Yurayt educational platform [website]. — URL: <https://urait.ru/bcode/536015> — date of request: 12/18/2025.
6. Glotko A.V., R. T. Adarina, O. N. Tretyakova ; under the general editorship of A.V. Glotko [et al.]. Microeconomics : a textbook : [16+] /– Novosibirsk : Zolotoy Kolos, 2019. – 133 p.: ill., tab. – Access mode: by subscription. – URL: <https://biblioclub.ru/index.php?page=book&id=616067> — date of request: 12/18/2025.
7. Grigoriev, M. N. Marketing: a textbook for universities / M. N. Grigoriev, 5th ed., revised. and add. Moscow : Yurait Publishing House, 2023. 559 p. (Higher education). — ISBN 978-5-534-05818-5.// Yurayt educational platform [website]. — URL: <https://urait.ru/bcode/510588> — date of reference: 12/18/2025.
8. Darmilova J. D. Innovation management: a textbook / Moscow: Dashkov and Co., 2022.3 th ed., ster. 168 p.
9. Ermilova M. I., Gryzunova N. V., Kosov M. E., Tsertseil Yu.S. Financial management: textbook / Moscow: Unity-Dana. 2023. 256 p. <https://biblioclub.ru/index.php?page=book&id=712620> . Textbook for higher education
10. Zhuravleva G. P., V. V. Gromyko, M. I. Zabelina [and others] Economic theory : microeconomics-1, 2, mesoeconomics : textbook / ; under the general editorship of G. P. Zhuravleva; Plekhanov Russian University of Economics. – 12th ed., erased. – Moscow : Dashkov and Co., 2024. – 934 p. : ill., tab. – URL: <https://biblioclub.ru/index.php?page=book&id=710939> — date of request: 12/18/2025.
11. Ivasenko, A. G. Macroeconomics : 100 examination answers : a textbook / A. G. Ivasenko, Ya. I. Nikonova. – 3rd ed., ster. – Moscow : FLINT, 2024. – 245 p. – URL: <https://biblioclub.ru/index.php?page=book&id=114924> — date of access: 12/18/2025.

12. Kargina L. A., A. A. Vovk, S. L. Lebedeva, O. E. Mikhnenko [et al.]. Digital Economy : textbook /— Moscow : Prometheus, 2020. — 223 p. : schematics., table, ill. — URL: <https://biblioclub.ru/index.php?page=book&id=612054> — date of request: 12/18/2025.

13. Korneychuk, B. V. Microeconomics: textbook and practical course for universities / B. V. Korneychuk. — 2nd ed., ispr. and add. Moscow : Yurait Publishing House, 2024. 305 p. (Higher education). — ISBN 978-5-534-07542-7. // Yurayt educational platform [website]. — URL: <https://urait.ru/bcode/537612> — date of request: 12/18/2025.

14. Korshunov, V. V. Economics of the organization (enterprise): textbook and workshop for universities / V. V. Korshunov. — 6th ed., revised. and add. Moscow : Yurait Publishing House, 2024. 363 p. (Higher education). — ISBN 978-5-534-16408-4. // Yurayt educational platform [website]. — URL: <https://urait.ru/bcode/535674> — date of access: 12/18/2025.

15. Kostyukhin Yu.Yu., O.O. Scriabin. Fundamentals of Production Management : textbook /— Moscow : NUST MISIS Publishing House, 2022 – 308 p.

16. Kostyukhin Yu.Y. [and others] Fundamentals of production management: a practical course /— Moscow : NUST MISIS Publishing House, 2020 – 227 p.

17. Kotler, Philip Fundamentals of Marketing A short course. Translated from English by Williams Publishing House, 2019— 496 p. ISBN: 978-5-8459-2013-3

18. Kotler, F. Marketing from A to Z: 80 concepts that every manager should know: a textbook / F. Kotler [et al.]. - 10th ed. – Moscow: Alpina Publisher, 2021. - 211 p. - ISBN 978-5-9614-6745-1.

19. Larionov I. K., S. N. Silvestrov, A. N. Gerasin [and others] Economic theory: economic systems: formation and development: textbook / ; edited by I. K. Larionov, S. N. Silvestrov. – 4th ed., erased. – Moscow: Dashkov and Co., 2023. – 874 p. : ill., tab. – (Educational publications for masters). — URL: <https://biblioclub.ru/index.php?page=book&id=697333> — date of request: 12/18/2025.

20. Margolina, E. V. Enterprise Economics: practical: textbook : [16+] / E. V. Margolina, T. A. Spitsyna ; Russian Presidential Academy of National Economy and Public Administration (RANEPA). – 3rd ed., revised – Moscow : Dashkov and Co., 2023. – 108 p. : tab. – Access mode: by subscription. – URL: <https://biblioclub.ru/index.php?page=book&id=709810> — date of request: 12/18/2025.

21. Maslova E. L. Management: textbook / Moscow: Dashkov and Co., 2024, 5th ed., 332 p. <https://biblioclub.ru/index.php?page=book&id=711137> . Textbook for higher education

22. Nabokov V. I. Management: textbook / Moscow: Dashkov and Co., 2024. 2nd ed., 186 p. <https://biblioclub.ru/index.php?page=book&id=709857> . Textbook for higher education

23. Reznik, G. A. Marketing: a textbook / G.A. Reznik. — 4th ed., revised and add. Moscow : INFRA-M, 2023. 199 p. (Higher education: Bachelor's degree). — DOI 10.12737/1242303. - ISBN 978-5-16-016830-2.

24. Sidorova E. Yu., O. T. Shipkova, E. N. Eliseeva [et al.] Fundamentals of digital economy and business transformation: textbook /. – Moscow: Limited Liability Company KnoRus Publishing House, 2023. – 260 p. – ISBN 978-5-406-10523-8. – EDN NFPHCB.

25. Scriabin O. O., O. N. Bykova, A. Yu. Anisimov [and others] Macroeconomics : textbook : [16+] /; Institute of World Civilizations. – Moscow : Institute of World Civilizations (IMC), 2019. - 136 p. : ill. – Access mode: by subscription. – URL: Digital Economy: textbook / O. T. Shipkova, E. N. Eliseeva,

A. A. Kuzmina, S. A. Ulyanova. – Moscow : Rusains Limited Liability Company, 2024. - 146 p. – ISBN 978-5-466-07893-0. – EDN RDUOVA.

26. Trushina E.V., O.O. Scriabin, A.A. Gudilin Marketing: textbook/. – Moscow: NUST MISIS Publishing House, 2023. – 216 p. ISBN 978-5-907560-70-3

27. Shipkova O. T., E. N. Eliseeva, A. A. Kuzmina, S. A. Ulyanova. Digital Economy: Textbook /– Moscow : Rusains Limited Liability Company, 2024. – 146 p. – ISBN 978-5-466-07893-0. – EDN RDUOVA.