PMI Risk Management Professional (PMI-RMP)®

EXAMINATION CONTENT OUTLINE

Project Management Institute

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Exam Content Outline

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INTRODUCTION

The Project Management Institute (PMI)® offers a professional credential for project risk managers, known as the PMI Risk Management Professional (PMI-RMP)®. PMI's professional credentialing examination development processes stand apart from other project management certification examination development practices. PMI aligns its process with certification industry best practices, such as those found in the *Standards for Educational and Psychological Testing*.

A key component of this process is that organizations wishing to offer valid and reliable professional credentialing examinations are directed to use a role delineation study (RDS) as the basis for the creation of the examination. This process uses knowledge and task-driven guidelines to assess practitioner competence, and determine the level of salience, criticality, and frequency of each of the knowledge, tasks, and skills required to perform to the industry-wide standard in the role of a project risk manager.

The role delineation study ensures the validity of an examination. Validation assures the outcome of the exam is in fact measuring and evaluating appropriately the specific knowledge and skills required to function as a project risk management professional. Thus, the role delineation study guarantees that each examination validly measures all elements of the project risk management profession in terms of real settings.

PMI-RMP® credential holders can be confident that their professional credential has been developed according to best practices of test development and based upon input from the practitioners who establish those standards. Please see Appendix A for a detailed description of the process.

The PMI-RMP examination is a vital part of the activities leading to earning a professional credential; thus, it is imperative that the PMI-RMP examination reflect accurately the practices of the project risk management professional. All the questions on the examination have been written and extensively reviewed by qualified PMI-RMP credential holders and are supported by current project risk management published references. These questions are mapped against the *PMI-RMP Examination Content Outline* to ensure that an appropriate number of questions are in place for a valid examination.

PMI retained Professional Examination Service (PES) to develop the global *PMI-RMP Examination Content Outline*. Since 1941, PES has provided a full range of assessment and advisory services to organizations across a broad range of professions, in support of professional licensure and certification, training, and continuing professional education. PES is dedicated to promoting the public welfare through credentialing as a mission-driven, not-for-profit organization.

Finally, while the *PMI-RMP Examination Content Outline*, the *Practice Standard for Project Risk Management* and *PMBOK® Guide* have commonalities, it is important to note that those involved in the study described previously were not bound by the *Practice Standard for Risk Management* and/or *PMBOK® Guide*. They were charged with defining the roles of individuals assessing and identifying project risks, mitigating threats and capitalizing on opportunities, and using their experience and pertinent resources to help in this task.

Although many of the domains, tasks, knowledge, and skills outlined by the *PMI-RMP Examination Content Outline* are also covered by the *Practice Standard for Project Risk Management* and *PMBOK® Guide*, there are some that are unique to the *PMI-RMP Examination Content Outline.* Candidates studying for the examination will certainly want to include the current edition of the *Practice Standard for Project Risk Management* and *PMBOK® Guide* as two of their references, and would be well advised to read other current titles on project risk management.

EXAM CONTENT OUTLINE

The following table identifies the proportion of questions from each domain that will appear on the examination. These percentages are used to determine the number of questions related to each domain and task that should appear on the multiple-choice format examination.

Domain	Percentage of Items on Test
Risk Strategy and Planning	19–20%
Stakeholder Engagement	19–20%
Risk Process Facilitation	25–28%
Risk Monitoring and Reporting	19–20%
Perform Specialized Risk Analyses	14–16%
Total	100%

DOMAINS AND TASKS

Domain 1: Risk Strategy and Planning

Activities related to developing policies, processes, and procedures for risk assessment, planning, and response.

Tasks	Risk Strategy and Planning (19–20%)
Task 1	**Develop risk assessment processes and tools that quantify stakeholder risk tolerances in order to assess and determine risk thresholds for the project and set criteria for risk levels.**
Task 2	**Update risk policies and procedures using information such as lessons learned from projects and outputs of risk audits in order to improve risk management effectiveness.**
Task 3	**Develop and recommend project risk strategy based on project objectives in order to establish the outline for the risk management plan.**
Task 4	**Produce risk management plan for the project on the basis of inputs such as project information, external factors, stakeholder inputs, and industry policies and procedures in order to define, fund, and staff effective risk management processes for the project that align with other project plans.**
Task 5	**Establish evaluation criteria for risk management processes based on project baselines and objectives in order to measure effectiveness of the project risk process.**
	Knowledge of: • Continuous process improvement as applied to risk management • Knowledge management techniques for organizing and providing access to project risk information • Metrics for measuring effectiveness of project risk process • Risk attitude concepts • Risk Breakdown Structure (RBS) • Risk tolerance concepts • Barriers to effective risk management • Project risk management inputs, tools, techniques, and outputs • Project risk contingency and management reserve • Research and analysis techniques • Basic strategy development methodologies

	Skills in: • Assessing stakeholder risk tolerance • Building stakeholder consensus

Domain 2: Stakeholder Engagement

Activities related to promoting the understanding of project risk management for stakeholders and project team members, assessing stakeholder risk tolerance, prioritizing project risk, and promoting risk ownership.

Tasks	Stakeholder Engagement (19–20%)
Task 1	**Promote a common understanding of the value of risk management by using interpersonal skills in order to foster an appropriate level of shared accountability, responsibility, and risk ownership.**
Task 2	**Train, coach, and educate stakeholders in risk principles and processes in order to create shared understanding of principles and processes, and foster engagement in risk management.**
Task 3	**Coach project team members in implementing risk processes in order to ensure the consistent application of risk processes.**
Task 4	**Assess stakeholder risk tolerance using processes and tools such as interviewing stakeholders and reviewing historical stakeholder behaviors in order to identify project risk thresholds.**
Task 5	**Identify stakeholder risk attitudes and cognitive biases using stakeholder analysis techniques in order to manage stakeholder expectations and responses throughout the life of the project.**
Task 6	**Engage stakeholders on risk prioritization process based on stakeholder risk tolerance and other relevant criteria, in order to optimize consensus regarding priorities.**
Task 7	**Provide risk-related recommendations to stakeholders regarding risk strategy and planning, risk process facilitation, risk reporting, and specialized risk tasks by using effective communication techniques in order to support effective risk-based decision making.**
Task 8	**Promote risk ownership by proactively communicating roles and responsibilities and engaging project team members in the development of risk responses in order to improve risk response execution.**
Task 9	**Liaise with stakeholders of other projects by using effective communication techniques and sharing information on project risk performance in order to inform them of implications for their projects.**
	Knowledge of: • Information resources, both internal (for example, OPA) and external (for example, EEF)

	• Project performance information • Stakeholder sensitivity analysis models • Training and coaching techniques • Types of stakeholder risk attitudes (including but not limited risk seeking, risk tolerant, and risk averse) • Group decision making • Group creativity (including but not limited to brainstorming, nominal group technique, Delphi technique, idea/mind mapping, and affinity diagram) **Skills in:** • Assessing stakeholder risk tolerance (appetite and attitude) • Collaborating with stakeholders • Managing teams in multicultural environments • Influencing change

Domain 3: Risk Process Facilitation

Activities related to facilitating risk identification, evaluation, prioritization, and response among project team members.

Tasks	Risk Process Facilitation (25–28%)
Task 1	**Apply risk assessment processes and tools in order to quantify stakeholder risk tolerances and determine risk levels.**
Task 2	**Facilitate risk identification using a variety of techniques in order to enable the project team and stakeholders to understand and determine the risk exposure of the project.**
Task 3	**Facilitate the project team's evaluation of the identified risks' attributes using qualitative and quantitative tools and techniques in order to prioritize the risks for response planning.**
Task 4	**Facilitate the development of an aligned risk response strategy and related risk actions by risk owners from the information gathered during risk analysis in order to ensure timely and defined action when required.**
Task 5	**Facilitate the formulation of project contingency reserve based on the risk exposure of the project in order to have the capability and resources to respond to realized risks.**
Task 6	**Provide risk data to cost and schedule analysts/estimators to ensure that project risk is properly reflected in cost and schedule estimates for the project.**
Task 7	**Use scenarios to validate potential risk responses and evaluate key dependencies and requirements in order to enhance the likelihood of project success.**
	Knowledge of: • Basic risk identification tools and techniques for both threats and opportunities (including but not limited to brainstorming, checklists, prompt lists, assumptions and constraints analysis, interviews, questionnaires, cause and effect analysis, SWOT analysis, document review, affinity diagrams, and lessons-learned review from similar projects) • Basic qualitative risk analysis tools and techniques (including but not limited to probability-impact matrices, risk scoring, Risk Breakdown Structure analysis, root cause analysis, Pareto prioritization analysis, and risk metric trend analysis) • Basic quantitative risk analysis tools and techniques (including but not

	limited to Monte Carlo analysis, decision trees, FMEA/FMECA/Fault Tree analysis, and sensitivity analysis) • Heuristics and other dynamic sources of cognitive biases and their associated effects on risk perception and behavior • Risk response strategy types • Contingency management tools and techniques • Risk monitoring and control techniques • Group decision making • Group creativity (including but not limited to brainstorming, nominal group technique, Delphi technique, idea/mind mapping, and affinity diagram) **Skills in:** • Using analytical software tools for project risk management • Managing teams in multicultural environments • Estimating probability and impact of identified risks

Domain 4: Risk Monitoring and Reporting

Activities related to monitoring risk, evaluating risk response against established metrics, and communicating risk response performance to stakeholders and project team.

Tasks	Risk Monitoring and Reporting (19–20%)
Task 1	**Document and periodically update project risk information using standard tools (including but not limited to risk register, risk database) and techniques in order to maintain a single, current repository of all project risk information.**
Task 2	**Coordinate with project manager using communication techniques in order to integrate risk management throughout the project.**
Task 3	**Create periodic standard and custom reports using risk-related metrics as specified in the risk management plan in order to communicate risk management activities and status.**
Task 4	**Monitor risk response metrics by analyzing risk response performance information, and present to key stakeholders in order to ensure resolution of risk and develop additional risk response strategies to address residual and secondary risks.**
Task 5	**Analyze risk process performance against established metrics in order to drive risk process improvements.**
Task 6	**Update the project risk management plan using relevant internal and external inputs in order to keep the plan current.**
Task 7	**Capture risk lessons learned through comprehensive review of the project risk management plan, risk register, risk audits, risk process performance reports, and other associated reports in order to incorporate into future risk planning.**
	Knowledge of: • Continuous process improvement and quality management as applied to risk management • Knowledge management techniques for organizing and providing access to project risk information • Alternative formats for project risk reports (for example, Top Risk List, Risks Transitioned to Issues, Response Plans Behind Schedule, Risk Triggers, and Risk Outcomes) • Requirements for risk register data fields • Risk statement construction

	• Risk response activity construction • Risk response metrics • Risk process performance metrics • Risk assessment analysis metrics • Risk management reserves (*Note—There are no skills specific only to Domain 4*)

Domain 5: Perform Specialized Risk Analyses

Activities related to the specialized quantitative and qualitative tools and techniques used by project risk management professionals.

Tasks	Perform Specialized Risk Analyses (14–16%)
Task 1	**Evaluate the attributes of identified risks using advanced quantitative tools and specialized qualitative techniques in order to estimate overall risk exposure of the project.**
Task 2	**Analyze risk data produced during the project using statistical analyses and expert judgment in order to determine strengths and weaknesses of risk strategy and processes and recommend process improvements when indicated.**
Task 3	**Perform specialized risk analysis using advanced tools and techniques in order to support stakeholder decision making for the project.**
	Knowledge of: • Advanced risk identification tools and techniques for both threats and opportunities (including but not limited to force field analysis, scenario planning, futures thinking, visualization, Delphi groups, and nominal group technique) • Advanced quantitative risk analysis tools and techniques (including but not limited to, integrated cost/schedule analysis, advanced Monte Carlo analysis, system dynamics, bowtie analysis, analytical hierarchy process, risk-based earned value analysis, risk-based critical chain analysis, and multi-factor regression analysis, modeling techniques, advanced risk metric analysis [including statistical process control]) • Tools and techniques for identifying and analyzing overall project risk (including but not limited to risk efficiency index, risk tolerance analysis, risk reserve analysis, risk metric trend analysis, risk taxonomy, risk connectivity analysis, Monte Carlo analysis against overall project objectives, project risk surveys, and correlation analysis) • Basic and advanced statistics • Estimation tools and techniques to support risk decision making (including but not limited to prioritization, cost-benefit analysis, analogous, parametric, and bottom-up) • Advanced theory of heuristics and other sources of cognitive bias • Variance/Earned Value Analysis

	Skills in: • Converting qualitative information into risk data • Building representative risk models • Managing and interpreting quantitative and qualitative data

All Domains	Core Knowledge and Skills
	Knowledge of: • Project risk management processes, frameworks, and theory (in line with the PMI Practice Standard for Project Risk Management) • Basic project management theory, methodologies, and practice (as described in the *PMBOK® Guide*) • Risk principles and guidelines as described in ISO31000 • Communication tools, techniques, models, and channels • Facilitation tools and techniques • Negotiation tools and techniques • Leadership theory as it relates to risk management • Organizational theory as it relates to risk management • Risk taxonomy • PMI Code of Ethics and Professional Conduct **Skills in:** • Effective oral, graphical, and written presentation • Tailoring information to all levels of stakeholders • Conducting effective interviews • Gathering, managing, analyzing, and validating data • Problem solving • Active listening • Conflict resolution • Expressing complex and abstract information • Influencing without authority • Coaching and mentoring

APPENDIX A: ROLE DELINEATION STUDY (RDS) PROCESS

Defining the Responsibilities

The first step in developing a certification examination is to define the responsibilities of the recipients of the credential. It must be known what the individuals who assess and identify project risks actually do on the job *before* a content-valid test can be developed. A valid examination draws questions from every important area of the profession and specifies that performance areas (domains) considered more important, critical, and relevant be represented by more questions on the examination. Defining the roles of individuals assessing and identifying project risk occurs in two major phases: one in which individuals currently in the role defines the responsibilities and another in which the identified responsibilities are validated on a global scale.

Beginning in 2011, PMI commissioned a global, Role Delineation Study (RDS) for the PMI-RMP® credential. The RDS process was led by a steering committee, representing PMI's Certification Governance structure. A project task force comprised of project risk managers was responsible for the conduct of work on the project, with oversight from the steering committee. The task force represented diversity of geography, industry, job position, and experience. Several other groups contributed to the formation and shaping of the RDS process, including representatives from organizations that utilize project risk management professionals for success, academic representatives, and Registered Education Providers (R.E.P.s). Project risk management professionals were also responsible for the independent reviews of the work of the task force and piloting the information before surveying a larger sample of project risk management professionals.

Study participants, working under the direction of Professional Education Service (PES), reached a consensus on the performance domains, a broad category of duties and responsibilities that define the role, as well as the tasks required for competence performance and the knowledge/skills needed to perform those tasks.

Validating the Responsibilities Identified by the Panelists

In order to ensure the validity of the study and content outline developed by the panels, a survey requesting feedback on the panel's work was sent to project risk management practitioners throughout the world. Surveys were distributed globally to over one thousand project risk managers around the world. PMI received a robust set of responses to the survey, with participants from 87 countries and representing every major industry. This provided PMI with the statistical significance from which to draw conclusions about the criticality for competent performance and frequency of the tasks. Practitioners also rated the knowledge and skills on how essential they were to their work as project managers and when they were acquired.

Developing a Plan for the Test

Based on respondent ratings, an examination blueprint, clarifying exactly how many questions from each domain and task should be on the examination, was developed. Those domains and tasks that were rated as most important, critical, and relevant by survey respondents would have the most questions devoted to them on the examination.

Results of the study indicated that the 150 scorable questions on the test should be distributed among the domains as shown in the following table. The remaining 20 questions will be dispersed throughout the domains as pretest questions and will not count in the candidates' scores. The pre-test items allow PMI to monitor the question performance better, prior to including the questions in the final databank of test questions.

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