### Scheme of examinations for administrative positions for Junior Assistant.

	Subject	Maximu m Marks	Time
(All question	ons will be objective type with no negative marking)		
Part-A	English Language- Written Communication, drafting skills (including email, letters) Comprehension, Grammar, Sentence correction, one words, Antonyms, Synonyms, Articles, etc.	10	
	Mathematics & Numerical Ability: Arithmetic - upto 10th Standard. Numerical Computation, Numerical Reasoning, Data Reasoning and Data Interpretation etc.	10	120 minutes
	<b>Reasoning Ability:</b> Number series, Letter series, Coding decoding, Direction sense, Blood Relations, Mathematical reasoning, Statements and Conclusions, Logical Reasoning etc.	10	
	General Awareness and Current Affairs: Current Affairs, Government Schemes, Economics, Geography, Indian History, Indian Polity, Indian Constitution.	10	
	Use of day-by-day computer applications and ERP/MS Office and Internet.	10	
	Part-A Total	50	
Part-B	Domain knowledge	50	
Total marks of written examination		100	120
			minutes

# Scheme of examinations for Domain knowledge for Junior Assistant.

1-	Fundamental Rules, Supplementary Rules, Pay, TA Rules, LTC Rules, Medical Attendance Rule, CGHS.
2-	CCS (Conduct) Rules, 1964; CCS (CCA) Rules, 1965.
3-	GFR 2017, GeM, Procurement of Goods & Services, General System of Financial Management, Income Tax.
4-	Office Procedure, Record Management, Public Administration, File Maintenance, Recordkeeping, Rajbhasha.
5-	CCS (Pension) Rules, NPS.
6-	RTI Act, 2005
7-	Reservation Roster and Direct Recrutiment Procedures.
8-	Knowledge of IITs and their Act and Statutes, Basic knowledge about academic admission procedures and academic programmes of Institutes like IITs.
9-	National Education Policy, Higher Education System in India, Regulatory Bodies in Higher Education.
10-	Computer Proficiency: Knowledge of MS Windows and MS Office, Internet, and email system.

- 1- The written examination is for qualifying only.
- 2- Only those candidates, who score minimum cut off marks in the examination, as may be fixed by the IIT Indore at its discretion, will be called for further stage of selection i.e. Skill Test/Trade Test /Job Suitability Personality Test.

# Scheme of examinations for administrative positions for Junior Superintendent.

	Subject	Maximu m Marks	Time
(All questi	ions will be objective type with no negative marking)		
Part-A	English Language- Written Communication, drafting skills (including email, letters) Comprehension, Grammar, Sentence correction, one words, Antonyms, Synonyms, Articles, etc.	10	
	Mathematics & Numerical Ability: Arithmetic - upto 10th Standard, Numerical Computation, Numerical Reasoning, Data Reasoning and Data Interpretation etc.	10	120 minutes
	Reasoning Ability: Number series, Letter series, Coding decoding, Direction sense, Blood Relations, Mathematical reasoning, Statements and Conclusions, Logical Reasoning etc.	10	
	General Awareness and Current Affairs: Current Affairs, Government Schemes, Economics, Geography, Indian History, Indian Polity, Indian Constitution.	10	
	Use of day-by-day computer applications and ERP/MS Office and Internet.	10	-
	Part-A Total	50	
Part-B	Domain knowledge	50	1
Total mar	ks of written examination	100	120 minutes

# Scheme of examinations for Domain knowledge for Junior Superintendent.

1-	Fundamental Rules, Supplementary Rules, Pay, TA Rules, LTC Rules, Medical Attendance Rule, CGHS.
2-	CCS (Conduct) Rules, 1964; CCS (CCA) Rules, 1965.
3-	GFR 2017, GeM, Procurement of Goods & Services, General System of Financial Management, Income Tax and GST, PFMS.
4-	Office Procedure, Record Management, Public Administration, File Maintenance, Recordkeeping, Rajbhasha.
5-	Retirement on Superannuation, CCS (Pension) Rules, NPS and Other Services Matters.
6-	RTI Act, 2005.
7-	Reservation Roster and Direct Recrutiment Procedures, Seniority, DPC, Promotions.
8-	Knowledge of IITs and their Act and Statutes, Basic knowledge about academic admission procedures and academic programmes of Institutes like IITs.
9-	National Education Policy, Higher Education System in India, Regulatory Bodies in Higher Education.
10-	Computer Proficiency: Knowledge of MS Windows and MS Office, Internet, and email system.

- 1- The written examination is for qualifying only.
- 2- Only those candidates, who score minimum cut off marks in the examination, as may be fixed by the IIT Indore at its discretion, will be called for further stage of selection i.e. Skill Test/Trade Test / Job Suitability Personality Test

# भारतीय प्रौद्योगिकी संस्थान इन्द्रौर खण्डवा रोड़, सिमरोल, इन्द्रौर - ४५३ ५५२, भारत

# Indian Institute of Technology Indore

Khandwa Road, Simrol, Indore - 453 552, India

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# Scheme of examinations for the position of Assistant Security Officer

	Subject	Maximu m Marks	Time
(All questi	ons will be objective type with no negative marking)		
	English Language- Written Communication, drafting skills (including email, letters) Comprehension, Grammar, Sentence correction, One words, Antonyms, Synonyms, Articles, etc.	10	
	<b>Mathematics &amp; Numerical Ability:</b> Arithmetic - Upto 10th Standard. Numerical Computation, Numerical Reasoning, Data Reasoning and Data Interpretation etc.	10	120 minutes
Part-A	Reasoning Ability: Number series, Letter series, Coding decoding, Direction sense, Blood relations, Mathematical reasoning, Statements and Conclusions, Logical Reasoning etc.	10	
	General Awareness and Current Affairs: Current Affairs, Government Schemes. Economics, Geography, Indian History, Indian Polity, Indian Constitution.	10	
	Use of day-by-day computer application and ERP/MS Office and software related to Security and Safety.	10	
	Part-A Total	50	
Part-B	Domain knowledge	50	
	Total marks of written examination	100	120
			minutes

# Scheme of examinations for Domain knowledge for Assistant Security Officer

1-	Security Operations
2-	Outsourced Manpower Management
3-	Security and Surveillance Gadgets.
4-	Visitor Management
5-	Gate and crowd management and incidents operations.
6-	Handling road accidents, theft, protest, fire, police FIR, suicide etc. incidents.
7-	Diester management, forest animals, snakes, and dog issues.
8-	Incident report writing and communication to supervisors, and guards.
9-	Parking Management

- 1- The written examination is for qualifying only.
- 2- Only those candidates, who score minimum cut off marks in the examination, as may be fixed by the IIT Indore at its discretion, will be called for further stage of selection i.e. Skill Test then Job Suitability Personality Test.



#### Scheme of examinations for administrative positions for Senior Engineer (Civil).

	Subject	Maximu m Marks	Time
(All questi	ons will be objective type with no negative marking)		
Part-A	English Language- Written Communication, drafting skills (including email, letters) Comprehension, Grammar, Sentence correction, one words, Antonyms, Synonyms, Articles, etc.	10	
	Mathematics & Numerical Ability: Arithmetic - upto 10th Standard. Numerical Computation, Numerical Reasoning, Data Reasoning and Data Interpretation etc.	10	120 minutes
	Reasoning Ability: Number series, Letter series, Coding decoding, Direction sense, Blood Relations, Mathematical reasoning, Statements and Conclusions, Logical Reasoning etc.	10	
	General Awareness and Current Affairs: Current Affairs, Government Schemes, Economics, Geography, Indian History, Indian Polity, Indian Constitution.	10	_
	Use of day-by-day computer applications and ERP/MS Office and Internet.	10	
	Part-A Total	50	
Part-B	Domain knowledge	50	
Total mar	ks of written examination	100	120 minutes

#### Scheme of examinations for Domain knowledge for Senior Engineer (Civil).

- 1. Surveying: Topography survey using dumpy level, theodolite and total station. Height of instrument method and Rise and fall method, Tachometry, photogrammetry Ground Levels and orthographic and radial contour plans. Triangulation. Area measurement for irregular shaped plans
- 2. Geotechnical engineering: Atterberg limits, bearing capacity of soil, soil investigation plate load test, SPT, site reconnaissance,
- 3. Concrete technology: properties of Concrete, tests for fresh and hardened Concrete, Concrete mix design as per IS 10262, Special Concrete viz lightweight Concrete, high density Concrete, self compacting Concrete etc, Ready mix design,
- 4. Strength of material: Stresses in beam, bending stresses, torsional stresses, deflection in beam using double integration method, area moment method and conjugate beam method, moment curvature relationship, Bending moment and shear force for single and multiple span beams, fixed end beams.
- 5. Theory of structure: Flexibility coefficient and stiffness methods for continuous beams and portal frame, moment distribution and Kani's Method. Plastic Theory of analysis.
- 6. Permissible axial load carrying capacity of column ,Eluler's formula for buckling load capacity.
- 7. Design of RCC structure: Design of isolated footing, combined footing and raft foundation. Permissible total and differential settlement in foundation, Lateral active and passive earth

- pressure Design of RCC cantilever retaining wall ,counterfort type wall. Design of Short column and long column, design of Beam and slab using limit state Method, stipulations of IS 456 -2000. Guidelines for durability of concrete structure.
- 8. Construction Technology: Brick masonry, Type of bonds English bond, Flemish bond, garden bond etc. Testing of bricks, brick masonry compressive strength, water absorption, dimensional accuracy etc. Testing of cement, coarse aggregates and fine aggregates. Testing of reinforcement steel tensile strength, elongation test, weight tolerances etc.
- 9. Design of formwork : Types of formwork . Design of formwork for Beam and slab.
- 10. Design of steel structure: Type of steel trusses, bolted and welded connection for steel structures, Design of plate girder, crane girder, steel trusses.
- 11. Construction management: network analysis CPM and PERT method. Cost slope and crash network for monitoring of project.
- 12. Design of water retaining structures: Design of Underground, on ground and overhead circular water tank, Intz type tank
- 13. Estimation and costing: Mode of measurement as per IS 1200, Rate analysis for Concrete, cement plaster ,flooring ,water proofing, door, windows etc.
- 14. Environmental engineering: Tests for Quality of drinking water, working principle of clariflocculator, chlorination, activated carbon etc.
- 15. Design of water supply distribution. Type of pressure loss in pipeline, Bernoulli's theorem.
- 16. Sewage treatment: BOD of sewage Aerobic and Anaerobic methods of Sewage treatment method, Design principles of Oxidation pond , oxidation ditch, Trickling filter , Activated sludge method. Septic tank etc
- 17. Transportation engineering: Geometrical design of road network, safe sight distance, design of superelevation on curves, ruling speed on roads, design of traffic signal, rotary, Type of pavement, design of flexible and rigid pavement. CBR for layers of flexible pavement, Optimum moisture content and max dry density of soil. Tests for materials for bituminous Concrete ie aggregates and bitumen. Marshal method of design of bituminous Concrete. Overlay/resurfacing of bituminous road, Determination of modulus of subgrade reaction

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- 2- Only those candidates, who score minimum cut off marks in the examination, as may be fixed by the IIT Indore at its discretion, will be called for further stage of selection i.e. Skill Test/Trade Test /Job Suitability Personality Test.



	Subject	Maximu m Marks	Time
(All questi	ons will be objective type with no negative marking)		
Part-A	English Language- Written Communication, drafting skills (including email, letters) Comprehension, Grammar, Sentence correction, one words, Antonyms, Synonyms, Articles, etc.	10	
	Mathematics & Numerical Ability: Arithmetic - upto 10th Standard, Numerical Computation, Numerical Reasoning, Data Reasoning and Data Interpretation etc.	10	120 minutes
	<b>Reasoning Ability:</b> Number series, Letter series, Coding decoding, Direction sense, Blood relations, Mathematical reasoning, Statements and Conclusions, Logical Reasoning etc.	10	
	General Awareness and Current Affairs: Current Affairs, Government Schemes, Economics, Geography, Indian History, Indian Polity, Indian Constitution.	10	
	Use of day-by-day computer applications and ERP/MS Office and Internet.	10	
	Part-A Total	50	
Part-B	Domain knowledge	50	
Total mar	ks of written examination	100	120
			minutes

# Scheme of examinations for Domain knowledge for Assistant Registrar.

1-	Fundamental Rules, Supplementary Rules, Pay, TA Rules, LTC Rules, Medical Attendance Rule, CGHS.
2-	CCS (Conduct) Rules, 1964; CCS (CCA) Rules, 1965.
3-	GFR 2017, GeM, Procurement of Goods & Services, General System of Financial Management, Income Tax and GST, PFMS.
4-	Office Procedure, Record Management, Public Administration, File Maintenance, Recordkeeping, Rajbhasha.
5-	Retirement on Superannuation, CCS (Pension) Rules, NPS and Other Services Matters.
6-	RTI Act, 2005.
7-	Reservation Roster and Direct Recrutiment Procedures, Seniority, DPC, Promotions.
8-	Knowledge of IITs and their Act and Statutes, Basic knowledge about academic admission procedures and academic programmes of Institutes like IITs.
9-	National Education Policy, Higher Education System in India, Regulatory Bodies in Higher Education.
10-	Computer Proficiency: Knowledge of MS Windows and MS Office, Internet, and email system.
11-	ERP-based Administration, Finance, Academic, Materials Management, Patents, Research Project Management, Student activities, International Relations, Alumni Relations, Legal Matters pertains to the Institute etc.

- 1. The written examination is for qualifying only.
- 2. Only those candidates, who score minimum cut off marks in the examination, as may be fixed by the IIT Indore at its discretion, will be called for further stage of selection i.e. Job Suitability Personality Test.

# Scheme of examinations for administrative positions for Executive Engineer (Civil)

	Subject	Maximu m Marks	Time
(All questi	ons will be objective type with no negative marking)		
Part-A	English Language- Written Communication, drafting skills (including email, letters) Comprehension, Grammar, Sentence correction, one words, Antonyms, Synonyms, Articles, etc.	10	
	Mathematics & Numerical Ability: Arithmetic - upto 10th Standard, Numerical Computation, Numerical Reasoning, Data Reasoning and Data Interpretation etc.	10	120 minutes
	<b>Reasoning Ability:</b> Number series, Letter series, Coding decoding, Direction sense, Blood relations, Mathematical reasoning, Statements and Conclusions, Logical Reasoning etc.	10	
	General Awareness and Current Affairs: Current Affairs, Government Schemes, Economics, Geography, Indian History, Indian Polity, Indian Constitution.	10	
	Use of day-by-day computer applications and ERP/MS Office and Internet.	10	
	Part-A Total	50	
Part-B	Domain knowledge	50	
Total marks of written examination		100	120
			minutes

# Scheme of examinations for Domain knowledge for Executive Engineer (Civil)

1.	General Conditions of Contract as per CPWD manual
2.	Construction management: network analysis CPM and PERT method. Cost lope and crash network for monitoring of project.
3.	Design of RCC structure:
4.	Design of isolated footing, combined footing and raft foundation. Design and construction of RCC cantilever retaining wall, counterfort type wall. stipulations of IS 456 -2000. Guidelines for durability of concrete structure.
5.	Durability of concrete structures, Factors affecting Durability of concrete, carbonation, alkali aggregate reaction, sulphate attack. Fire resistance of concrete. Concrete mix design. as per IS 10262, Special Concrete viz lightweight
6.	Concrete, high-density Concrete, self-compacting Concrete etc Ready mix design.
7.	Geotechnical engineering: Atterberg limits, bearing capacity of soil, soil investigation plate load test, SPT, site reconnaissance
8.	Design of RCC structure: Design of isolated footing, combined footing and raft foundation. Permissible total and differential settlement in foundation, Lateral active and passive earth pressure Design of RCC cantilever retaining wall, counterfort type wall. Design of Short column and long column, design of Beam and slab using limit state Method, stipulations of IS 456 -2000. Guidelines for durability of concrete structure.
9.	Construction Technology: Testing of bricks, brick masonry compressive strength, water absorption, dimensional accuracy etc. Testing of cement, coarse aggregates and fine

	aggregates. Testing of reinforcement steel tensile strength, elongation test ,weight tolerances etc.
10.	Design of formwork: Types of formworks. Design of formwork for Beam and slab.
11.	Design of steel structure: Type of steel trusses, bolted and welded connection for steel structures, Design of plate girder, crane girder, steel trusses
12.	Estimation and costing: Mode of measurement as per IS 1200, Rate analysis for Concrete, cement plaster, flooring, water proofing, door, windows etc.
13.	Environmental engineering: Tests for Quality of drinking water, working principle of Clar flocculator, chlorination, activated carbon etc. Design of water supply distribution. Sewage treatment: BOD of sewage Aerobic and Anaerobic methods of Sewage treatment method.
14.	Transportation engineering: Geometrical design of road network, safe sight distance, design of superelevation on curves, ruling speed on roads, design of traffic signal, rotary, Type of pavement, design of flexible and rigid pavement. CBR for layers of flexible pavement, Optimum moisture content and max dry density of soil. Tests for materials for bituminous Concrete.
15.	Seismic resistant design of structures: Basic principles and Stipulations of IS 1893 and IS 13920.
16.	Design of steel structure: Type of steel trusses, bolted and welded connection for steel structures, Design of plate girder, crane girder, steel trusses
17.	Pre-engineered buildings design and construction
18.	Design and construction of prestressed concrete structures
19.	Technical specifications for concrete, steel and other building materials Construction safety procedures, height pass format etc.

# **Notes:**

- The written examination is for qualifying only.
  Only those candidates, who score minimum cut off marks in the examination, as may be fixed by the IIT Indore at its discretion, will be called for further stage of selection i.e. Job Suitability Personality Test.