

23/11/2018

Most urgent
Date bound

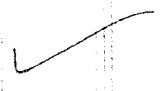


Chaudhary Devi Lal University
Sirsa, Haryana, Pin- 125055, (India)

1722
24/11/18

Paper Assessment Scheme
For
Post Graduate Course,
For 2 Year(s) Master Degree Program in
Faculty of Physical Science

Master of Technology (with Credits)(M.Tech.)
(Credits System)



(w.e.f. 2017-18-Regular)
Civil Engineering(Construction Technology & Management)
Course Code: 1

May be forwarded to Dean, faculty of Engg
for verification, please
supdt (EDP) - busy
Mc (EDP)

21/11/18

Dean - (Engg) / AR (Acad) 21/11/18

Dy Supdt (Acad)

Paper Name: Construction Methods and Equipments									
Paper Code: MCM-201 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	-	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: Management of Quality and Safety in Construction									
Paper Code: MCM-202 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	-	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: Building Services and Maintenance Management									
Paper Code: MCM-203 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	-	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: GIS in Construction Engineering and Management Reliability									
Paper Code: MCM-211 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	-	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: Reliability Analysis in Construction Management									
Paper Code: MCM-212 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	-	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: Quality Control in Construction Lab									
Paper Code: MCP-204 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lab	4	2.00	Practical	-	100	EA	28	70	Marks System
						IA	12	30	Marks System

Course Part: S.Y.M.Tech Separate Passing Head: No, Min: 0, Max: 600, Total Credits: 30.00

Term: Sem III Separate Passing Head: No, Min Papers: 3, Max Papers: 3, Min: 0, Max: 300, Total Credits: 15.00

The papers under Sem III are as follows:

Paper Name: Dissertation Part-I with Seminar									
Paper Code: MCD-301 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Dissertation	5	5.00	Dissertation	40	100	IA	40	100	Marks System
Paper Name: Construction Economics and Finance									
Paper Code: MCM-301 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	40	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: Recent Advances in Construction Materials									
Paper Code: MCM-312 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	40	100	EA	28	70	Marks System
						IA	12	30	Marks System

Elective

Course Part: F.Y.M.Tech.

Term: Sem-I

The papers for F.Y.M.Tech. - Sem-I are classified into following groups:

1.Course Group (Min SubGroups: 1, Max SubGroups: 2,
Separate Passing Head: No, Max. Marks: 0)

Select minimum 1 SubGroup(s)
Select maximum 2 SubGroup(s)

SubGroups:

1.Core Group (Min Papers: 4, Max Papers: 4,
Separate Passing Head: No, Max. Marks: 400)
Select minimum 4 paper(s)
Select maximum 4 paper(s)

Papers:

MCM-101	Project Planning and Control
MCM-102	Civil Engg. Materials
MCM-103	Quantitative Methods in Construction Management
MCP-104	Computational Laboratory for Construction Management

2.Elective Group (Min Papers: 1, Max Papers: 1,
Separate Passing Head: No, Max. Marks: 100)
Select minimum 1 paper(s)
Select maximum 1 paper(s)

Papers:

MCM-111	Construction Engineering Practices
MCM-112	Construction and Contract Management

Term: Sem II

The papers for F.Y.M.Tech. - Sem II are classified into following groups:

1.Course Group (Min SubGroups: 1, Max SubGroups: 2,
Separate Passing Head: No, Max. Marks: 0)

Select minimum 1 SubGroup(s)
Select maximum 2 SubGroup(s)

SubGroups:

1.Core Group (Min Papers: 5, Max Papers: 5,
Separate Passing Head: No, Max. Marks: 0)
Select minimum 5 paper(s)
Select maximum 5 paper(s)

Papers:

MCM-201	Construction Methods and Equipments
MCM-202	Management of Quality and Safety in Construction
MCM-203	Building Services and Maintenance Management
MCM-212	Reliability Analysis in Construction Management
MCP-204	Quality Control in Construction Lab

2.Elective Group (Min Papers: 1, Max Papers: 1,
Separate Passing Head: No, Max. Marks: 0)
Select minimum 1 paper(s)
Select maximum 1 paper(s)

Papers:

MCM-211	GIS in Construction Engineering and Management Reliability
---------	--

Course Part: S.Y.M.Tech

Term: Sem III

The papers for S.Y.M.Tech - Sem III are classified into following groups:

1.Core Group (Min Papers: 3, Max Papers: 3,
Separate Passing Head: No, Max. Marks: 0)
Select minimum 3 paper(s)
Select maximum 3 paper(s)

Papers:

Paper Name: Construction Methods and Equipments									
Paper Code: MCM-201 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	-	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: Management of Quality and Safety in Construction									
Paper Code: MCM-202 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	-	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: Building Services and Maintenance Management									
Paper Code: MCM-203 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	-	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: GIS in Construction Engineering and Management Reliability									
Paper Code: MCM-211 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	-	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: Reliability Analysis in Construction Management									
Paper Code: MCM-212 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	-	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: Quality Control in Construction Lab									
Paper Code: MCP-204 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lab	4	2.00	Practical	-	100	EA	28	70	Marks System
						IA	12	30	Marks System

Course Part: S.Y.M.Tech Separate Passing Head: No, Min: 0, Max: 600, Total Credits: 30.00

Term: Sem III Separate Passing Head: No, Min Papers: 3, Max Papers: 3, Min: 0, Max: 300, Total Credits: 15.00

The papers under Sem III are as follows:

Paper Name: Dissertation Part-I with Seminar									
Paper Code: MCD-301 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Dissertation	5	5.00	Dissertation	40	100	IA	40	100	Marks System
Paper Name: Construction Economics and Finance									
Paper Code: MCM-301 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	40	100	EA	28	70	Marks System
						IA	12	30	Marks System
Paper Name: Recent Advances in Construction Materials									
Paper Code: MCM-312 Min: -- Max: 100									
TLM	Hrs	Credits	AM	Min	Max	AT	Min	Max	Evaluation System
Lectures	5	5.00	Theory	40	100	EA	28	70	Marks System
						IA	12	30	Marks System

Elective

[Handwritten signature]

[Handwritten signature]

-04-

MCM-301	Construction Economics and Finance
MCM-312	Recent Advances in Construction Materials
MCD-301	Dissertation Part-i with Seminar



- 05 -

M. Tech. Civil Engg with Specialization in CONSTRUCTION TECHNOLOGY AND MANAGEMENT

The total minimum credits required for completing the M. Tech Civil Engg with Specialization in CONSTRUCTION TECH. and MANAGEMENT Courses is 70

SEMESTER I

Code	Course of study	Teaching Schedule			Total	Time of Exams(Hrs)	Credit
		Theory	Sessional	Practical			
MCM-101	Project Planning and Control	70	30	-	100	3	5
MCM-102	Civil Engg. Materials	70	30	-	100	3	5
MCM-103	Quantitative Methods in Construction Management	70	30	-	100	3	5
MCM-104	Departmental Elective - <u>Construction Engg. Practice</u>	70	30	-	100	3	5
MCP-104	Computational laboratory for Construction Management (16)	-	30	70	100	3	5
	Total	280	150	70	500		22

-06

W

SEMESTER II

Code	Course of study	Theory	Sessional	Practical	Total	Time of Exams(Hrs)	Credit
MCM-201	Construction Methods and Equipments	70	30	-	100	3	5
MCM-202	Management of Quality and Safety in Construction	70	30	-	100	3	5
MCM-203	Building Services and Maintenance Management	70	30	-	100	3	5
MCM-212	Departmental Elective - II <i>Reliability analysis in Const. Management</i>	70	30	-	100	3	5
MCP-204	Quality Control in Construction (CT)	30	30	70	100	3	2
	Total	280	150	70	500		22

SEMESTER III

Code	Course of study	Teaching Schedule		Total	Time of Exams(Hrs)	Credit
		Theory	Sessional			
MCM-301	Construction Economics and Finance	70	30	100	3	5
MCM-312	Departmental Elective - III <i>Recent Advances in Construction Materials</i>	70	30	100	3	5
MCD-301	Dissertation part - I with Seminar	-	100	100	3	5
	Total	140	160	300		15

*To be evaluated internally by Committee constituted by Chairperson of the Department/Director-Principal of the Institute

Semester IV

NCD-III	Description part II with internal and viva voce	Theory	Assessment	Practical	Total	Zone of Learning	Credits
				100	100		11
To be evaluated jointly by internal supervisor and external examiner							
Total credits for All Semester = 70							

NOTE:- One credit in theory paper is equivalent to 1 hour classroom teaching per week & 1 credit in practical/lab course is equivalent to 2 hour practical/lab work per week. teacher will conduct practical class in a group of 10-15 students

- 08 -

List of Electives for M. Tech, Civil Engg. with Specialization in (Construction Technology and Management)

List of Elective-I

1. MCM-111 Construction Engineering Practices ✓ (1st-Semester)
2. MCM-112 Construction and Contract Management

List of Elective II

1. MCM-211 GIS in Construction Engineering and Management, Reliability
2. MCM-212 Reliability Analysis in Construction Management ✓ (2nd-Semester)

List of Elective III

1. MCM-311 System Design and Value Analysis
2. MCM-312 Recent Advances in Construction Materials ✓ (3rd-Semester)

M. Tech Civil (Construction Technology and Management), First Semester
MGM-101 Project Planning & Control

T.P.D. Total
4 1 5

Max Marks : 100
Theory : 70 Marks
Sessional : 30 Marks
Duration : 3 Hours

Work study, Work breakdown structure, Time estimates, Applications of CPM/PERT, statical concepts, Man-Material-Machinery-Money optimization, scheduling, monitoring, updating, Cost functions, time-cost trade off, resource planning-leveling and allocation, Resources - based networks, crashing, master networks, interface activities and dependencies, line of balancing techniques, application of digital computers, Material management-purchases management and inventory control, ABC analysis, Human Resource Management.

Reference Books:

- 1) Chitkara, K.K. Construction Project Management: Planning Scheduling and Control Tata McGraw Hill Publishing Company, New Delhi, 1998
- 2) Calin M. Popescu, Chotchal Charoenngam, Project Planning, Scheduling and Control in Construction - An Encyclopedia of terms and Applications, Wiley, New York, 1995
- 3) Chris Hendrickson and Tung Au, Project Management for Construction - Fundamental Concepts for Owners, Engineers, Architects and Builders, Prentice Hall Pittsburgh, 2000
- 4) Moder, J. C, Phillips and E. Davis, Project Management with CPM, PERT and Precedence Diagramming, Van Nostrand Reinhold Company, Third Edition, 1983
- 5) Willis, E. M., Scheduling Construction Projects, John Wiley & Sons, 1986
- 6) Halpin, D. W. Financial and Cost Concepts for Construction Management, John Wiley & Sons, New York, 1985

NOTE: The examiner is required to set eight questions in all and the candidates are required to attempt any five questions.

M.Tech Civil (Construction Technology and Management), First Semester
MCM-102 Civil Engineering Materials

1	1	P/D	Total
4	1		5

Max Marks	: 100
Theory	: 70 Marks
Sessional	: 30 Marks
Duration	: 3 Hours

Cement selection for civil works. Concrete making materials. Fresh concrete and its rheology properties. Mechanical, deformational behavior and microstructure of hardened concrete. Creep and shrinkage. Laboratory testing of concrete. Durability of plain and reinforced concrete. Structural steels including alloyed and cold-worked steels.

Reference Books:

- 1) Merhaz, K and Monteiro P.J.M., "CONCRETE", Microstructure, Properties and Materials, Third Edition, Tata Mc Graw - Hill Publishing company Limited, New Delhi, 2006.
- 2) Shetty, J.S., "Concrete Technology, Theory and Practice", Revised Edition, S. Chand & company Ltd., New Delhi, 2006.
- 3) Neville, A.M., "Properties of Concrete", 3th Edition Longman, 1995.
- 4) Mindes and Young, "Concrete", Prentice Hall, 1998.

NOTE: The examiner is required to set eight questions in all and the candidates are required to attempt any five questions.

-11-

M. Tech Civil (Construction Technology and Management), First Semester
MC-M-103 Quantitative Methods in Construction Management

L	T	P/D	Total
4	1	-	5

Max Marks	: 100
Theory	: 70 Marks
Sessional	: 30 Marks
Duration	: 3 Hours

Introduction and concepts of probability and statistics. Linear programming, Transportation and assignment problems. Dynamic programming, Queuing theory, Decision theory, Games theory simulations applied to construction. Modifications and improvement on CPM/PERT techniques.

Reference Books:

- 1) Gupta, S.C., and Kapoor, V.K. Fundamentals of mathematical statistics, Sultan Chand and sons, Reprint 2003
- 2) Gupta, S.C., and Kapoor, V.K. Fundamentals of Applied statistics. Sultan Chand and sons, 2003
- 3) Veerarajan, T., Probability Statistics and Random processes, TMH, First reprint, 2004
- 4) Vohra, N.D., "Quantitative Techniques in Management", Tata McGraw Hill Co., Ltd, New Delhi, 1990
- 5) Seehawler, R.G., "Operations Management", McGraw Hill, USA, 1982
- 6) Levin, R.I., Rubin, D.S., and Stinson, J., "Quantitative Approaches to Management" McGraw Hill Book Co., 1988
- 7) Frank Harrison, F., "The Managerial Decision Making Process", Houghton Mifflin Co. Boston, 1975
- 8) Varshney, R.L. and Maheswari, K.L., "Managerial Economics", Sultan Chand, 1975

NOTE: The examiner is required to set eight questions in all and the candidates are required to attempt any five questions.

Departmental Electives

M.Tech Civil (Construction Technology and Management)
MCM-III Construction Engineering Practices

L	T	W/D	Total
4	1		5

Max Marks	: 100
Theory	: 70 Marks
Sessional	: 30 Marks
Duration	: 3 Hours

Concrete construction methods: form work design and scaffolding, slip form and other moving forms, pumping of concrete and grouting mass concreting (roller compacted concrete), ready mixed concrete, various methods of placing and handling concrete, Accelerated curing, Hot and cold weather concreting, Under water concreting, pre-stressing.

Reference books:

- 1) Robert Wade Brown, Practical foundation engineering hand book, McGraw Hill Publications, 1995
- 2) Patrick Powers J., Construction Dewatering: New Methods and Applications John Wiley & Sons, 1992
- 3) Jerry Irvine, Advanced Construction Techniques CA Rockers, 1984
- 4) Gourifoy, R.L., Ledbetter, W.B. and Schexnayder, C., Construction Planning Equipment and Methods, McGraw Hill, Singapore 1995
- 5) Sharma S.C. Construction Equipment and Management, Khanna Publishers, Delhi, 1988
- 6) Deodhar, S.V. Construction Equipment and Job Planning Khanna Publishers Delhi, 1988
- 7) Dr. Mahesh Varma, Construction Equipment and its planning and application, Metropolitan Book Company, New Delhi 1983

NOTE: The examiner is required to set eight questions in all and the candidates are required to attempt any five questions.

M.Tech Civil (Construction Technology and Management), First Semester
MCM-104 Computational Laboratory for Construction Management (Lab-I)

L	1	2/D	Total
		2	2

Max Marks : 100
Practical : 70 Marks
Sessional : 30 Marks
Duration : 3 Hours

List of Experiments:

PRIMAVERA

1. Planning and Scheduling of Multi storied building
2. Planning and scheduling of Road Project
3. Prepare the resource sheet, assign and level the resource
4. Preparing different reports available in Primavera
5. Plot the variance graphs for the given Project

M. Tech (Civil) (Construction Technology and Management), Second Semester
MCME-203 Building Services & Maintenance Management

1	1	P/D	Total
4	1		5

Max Marks	: 100
Theory	: 70 Marks
Sessional	: 30 Marks
Duration	: 3 Hours

Components of urban forms and their planning. Concepts of neighborhood unit. Street system and layout in a neighborhood. Functional planning of buildings. optimization of space: Spatial Synthesis graphical techniques, heuristic procedures, formulation of linear and non-linear optimization problem. Space requirements and relationships for typical buildings, like residential offices, hospitals, etc.

Standard fire, fire list, fire resistance, classification of buildings, means of escape, alarms, etc. Engineering services in a building as a systems. Lifts, escalators, cold and hot water systems, waste water systems, and electrical systems.

Building Maintenance: Scheduled and contingency maintenance planning, M.I.S. for building maintenance. Maintenance standards. Economic maintenance decisions.

Reference Books:

- 1) G. G. Fair, J. C. Geyer and D. Okun, Water and waste Engineering, Vol. II, John Wiley & sons, Inc., New York, 1968
- 2) R. C. Hopkinson and J. D. Kay, The Lighting of buildings, Faber and Faber, London, 1969
- 3) Hand book for Building Engineers in Metric systems, NBC, New Delhi, 1968
- 4) Philips Lighting in Architecture Design, McGraw Hill, New York, 1964
- 5) Time-saver Standards for Architecture Design Data, Callendar JH, McGraw Hill, 1974
- 6) William H. Severns and Julian R. Fellows, Air conditioning and refrigeration, John Wiley and sons.

NOTE: The examiner is required to set eight questions in, all and the candidates are required to attempt any five questions.

7
15

Q. No.	Part	Time
4	1	5

Max Marks	: 100
Theory	: 70 Marks
Sessional	: 30 Marks
Duration	: 3 Hours

Introduction: Quality Planning and control of quality during design of structure. Quantitative techniques in quality control. Quality assurance during construction. Inspection of materials and machinery. In process inspection and test. Preparation of quality manuals, check list and inspection report. Establishing quality assurance system. Quality standards in design and construction. Concepts and philosophy of total quality management (TQM). Training in quality and quality management systems.

Concept of safety factors affecting safety. Physiological, Psychological and Technological. Planning for safety. Designing safety. Safety committees. Safety education and training. Use of equipment. Safety signs and symbols. Inspection and provision of first aid. Management plans of safety. Site management with regard to safety. Production safety. Training for safety. Accidents and investigations. Formulation of safety manual. Safety legislation, standards and codes of practice. Quality or Safety Case Studies.

References:

1. "Quality Management in Construction", by R. K. Jain, Tata Consultancy Services, New Delhi, India, 1998.
 2. "Quality Management in Construction", by R. K. Jain, Tata Consultancy Services, New Delhi, India, 1998.
 3. "Quality Management in Construction", by R. K. Jain, Tata Consultancy Services, New Delhi, India, 1998.
 4. "Quality Management in Construction", by R. K. Jain, Tata Consultancy Services, New Delhi, India, 1998.
 5. "Quality Management in Construction", by R. K. Jain, Tata Consultancy Services, New Delhi, India, 1998.

Note: The examiner is required to set eight questions in all and the candidates are required to attempt any five questions.

M.Tech Civil (Construction Technology and Management), Second Semester
MCM-201 Construction Methods & Equipments

L	T	P/D	Total
4	1		5

Max Marks	: 100
Theory	: 70 Marks
Sessional	: 30 Marks
Duration	: 3 Hours

Factors affecting selection of equipment - technical and economic, construction engineering fundamentals, Analysis of production outputs and costs, Characteristics and performances of equipment for Earth moving, Erection, Material transport, Pile driving, Dewatering, Concrete construction (including batching, mixing, transport and placement) and Tunneling.

Reference Books:

1. Robert Wade Brown, Practical foundation engineering hand book, McGraw Hill Publications, 1995
2. Patrick Powers J, Construction Dewatering: New Methods and Applications John Wiley & Sons, 1992
3. Jerry Irvine, Advanced Construction Techniques CA Rockers, 1984
4. Petrific, R.L., Ledbetter, W.B. and Schexnayder C, Construction Planning Equipment and Methods, McGraw Hill, Singapore 1995
5. Sharma S.C. Construction Equipment and Management, Khanna Publishers, Delhi, 1988
6. Doodha S.V. Construction Equipment and Job Planning Khanna Publishers Delhi, 1988
7. Dr. Manish Varna, Construction Equipment and its planning and application, Metropolitan Book Company, New Delhi 1983

NOTE: The examiner is required to set eight questions in all and the candidates are required to attempt any five questions.

M.Tech Civil (Construction Technology and Management)
MCM-219 Reliability Analysis in Construction Management

L	(1)	(20)	Total	Max Marks	: 100
4	1		B	Theory	: 70 Marks
				Sessional	: 30 Marks
				Duration	: 3 Hours

Probability Theory: Mutually exclusive events, set theory, sample points and sample space, laws of probability, total probability theorem, Baye's rule, random variables-discrete and continuous, jointly distributed discrete variables, marginal distribution, conditional distribution, jointly distribution continuous variables, functions of random variables, moments and expectations, common probability distribution normal, Lognormal, Gamma and Beta distribution, external distribution. Resistance Distribution and Parameters: Statistics of properties of concrete and steel, Statistics of strength of bricks and mortar, Characterization of variables, allowable stresses based on specified reliability. Monte Carlo Study of Reliability: Monte Carlo Method Inverse transformation technique, Application to columns beams and frames. Level 2 Reliability Methods: Basic variables and failure surface, first order second moment methods, Hooper and Lind's method, Non-normal distributions; determination of reliability index B of structural elements. Reliability Based Design: Determination of partial safety checking formats, Development of reliability based criteria, optimal safety factors, and calibration of IS 456 and IS 800 Reliability of Structural Systems: System reliability, modeling of structural systems, bounds on system reliability, automatic generation of a mechanism, generation of dominant mechanism, reliability analysis of R.C.C. and steel frames.

Reference Books:

1. Ranganathan, R. (1990) 'Reliability Analysis and Design of Structures' Tata McGraw Hill Delhi.
2. Rao, S. 'Reliability based Design' Tata McGraw Hill Delhi.
3. Chopra, D.L. (1989) 'A Primer of Reliability Theory', John Wiley, New York.
4. Low, B.E. (1987) 'Introduction to Reliability Engineering' John Wiley, New York.

NOTE: The examiner is required to set eight questions in all and the candidates are required to attempt any five questions.

M. Tech Civil (Construction Technology and Management)
MCM-312 Recent Advances in Construction Materials

P/D
5

Max Marks : 100
Theory : 70 Marks
Sessional : 30 Marks
Duration : 3 Hours

Foams and light weight materials, fibre reinforced concrete, Types of fibres, workability, mechanical and physical properties of fibre reinforced concrete, Industrial waste materials in concrete, their influence on physical and mechanical properties and durability of concrete, Concrete at high temperature, High strength concrete, Changes in concrete with time, Corrosion of concrete in various environments, Corrosion of reinforcing steel, Electro-chemical process, measures of protection, Ferro-cement, material and properties, Polymers in Civil Engineering Polymers, fibres and composites, Fibre reinforced plastic in sandwich panels, modelling, Architectural use and aesthetics of composites, Adhesives and sealants, Structural elastomeric bearings and resilient seating, Moisture barriers, Polymer foams and polymers in Building Physics, Polymer concrete composites.

Reference Books:

1. Mehta P.K. and Monteiro, P.J.M., "CONCRETE", Microstructure, Properties and Materials, Third Edition, Tata McGraw-Hill Publishing company Limited, New Delhi, 2006.
2. Shetty, M.S., "Concrete Technology, Theory and Practice", Revised Edition, S. Chand & company Ltd., New Delhi, 2006.
3. Neville, A.M., "Properties of Concrete", 4th Edition Longman, 1995.
4. Mindass and Young, "Concrete", Prentice Hall, 1998.

NOTE: The examiner is required to set eight questions in all and the candidates are required to attempt any five questions.

-19-

M.Tech Civil (Construction Technology and Management), Second Semester
MCM-204 Quality Control in Construction - Lab

L	T	P/D	Total
-	-	2	2

Max Marks	: 100
Practical	: 70 Marks
Sessional	: 30 Marks
Duration	: 3 Hours

List of Experiments:

1. Mix Design of Concrete
2. Tests on fresh concrete
3. Tests on hardened concrete
4. In-situ Strength determination by Rebound Hammer.
5. Measurement of Moisture content in aggregates, soil and hardened concrete surface using NDT techniques.
6. Pull-out Tests on concrete
7. Effect of Chemical admixtures on fresh and harden properties of concrete
8. Effect of mineral admixtures on fresh and harden properties of concrete
9. Tests on Bitumen materials
10. Tests on Course aggregates for road construction

Reference Books:

- 1) Melton, P. K. and Monteiro, P. J. M. "CONCRETE", Microstructure, Properties and Materials, Third Edition, Tata Mc Graw-Hill Publishing company Limited, New Delhi, 2006
- 2) Shetty, M. S., "Concrete Technology", Theory and Practical, Revised Edition, S. Chand & company Ltd., New Delhi, 2006
- 3) Neville, A.M., "Properties of Concrete", 4th Edition Longman, 1995
- 4) Mindess and Young, "Concrete", Prentice Hall 1995

M.Tech Civil (Construction Technology and Management), Third Semester
MCM-301 Construction Economics & Finance

L	T	P/D	Total
4	1	-	5

Max Marks	: 100
Theory	: 70 Marks
Sessional	: 30 Marks
Duration	: 3 Hours

Construction accounting, Income statement, Depreciation and amortization, Engineering economics, Time value of money, discounted cash flow, NPV, ROR, PI, Bases of comparison, Incremental rate of return, Benefit-cost analysis, Replacement analysis, Break even analysis, Risks and uncertainties and management decision in capital budgeting, Taxation and inflation, Work pricing, cost elements of contract, bidding and award, revision due to unforeseen causes, escalation, Turnkey activities, Project appraisal and project yield, Working capital management, financial plan and multiple sources of finance, International finance, Budgeting and budgetary control, Performance budgeting, appraisal through financial statements, Practical problems and case studies.

Reference books:

- 1) Eugene F. Brigham, Michael C. Ehrhardt, "Financial Management Theory and Practice", Cengage Learning, 2010
- 2) Simon A. Burtonshaw-Gunn, "Risk and Financial Management in Construction", Gower Publishing, Ltd., 2009
- 3) Warren Z. Hirsch, Urban Economics, Macmillan, New York, 1993

NOTE: The examiner is required to set eight questions in all and the candidates are required to attempt any five questions.

M.Tech Civil (Construction Technology and Management)
MOM-312 Recent Advances in Construction Materials

QD Total
5

Max Marks : 100
Theory : 70 Marks
Sessional : 30 Marks
Duration : 3 Hours

Foams and light weight materials, fibre reinforced concrete. Types of fibres, workability, mechanical and physical properties of fibre reinforced concrete. Industrial waste materials in concrete, their influence on physical and mechanical properties and durability of concrete. Concrete at high temperature. High strength concrete. Changes in concrete with time, Corrosion of concrete in various environments. Corrosion of reinforcing steel. Electro-chemical process, measures of protection. Ferro-cement, material and properties. Polymers in Civil Engineering Polymers, fibres and composites, Fibre reinforced plastic in sandwich panels, modeling. Architectural use and aesthetics of composites. Adhesives and sealants. Structural elastomeric bearings and resilient seating. Moisture barriers. Polymer foams and polymers in Building Physics. Polymer concrete composites.

Reference Books:

1. Mehta P.K. and Monteiro, P.J.M., "CONCRETE", Microstructure, Properties and Materials. Third Edition, Tata McGraw- Hill Publishing company Limited, New Delhi, 2006
2. Shetty M.S., "Concrete Technology, Theory and Practice", Revised Edition, S. Chand & company Ltd., New Delhi, 2006
3. Neville, A.M., "Properties of Concrete", 4th Edition Longman, 1995
4. Mindess and Young, "Concrete", Prentice Hall, 1998

NOTE: The examiner is required to set eight questions in all and the candidates are required to attempt any five questions.

- 22 -

M. Tech Civil (Construction Technology and Management)
MCM-311 Systems Design and Value Analysis

L	P/D	Total
1	1	5

Max Marks	: 100
Theory	: 70 Marks
Sessional	: 30 Marks
Duration	: 3 Hours

Analysis synthesis, Appraisal, System design procedure, objectives and constraints, application to buildings, value analysis, Introduction, function analysis Job plan, Value savings during construction, Value management, Case studies in Value engineering.

Reference Books:

1. Keith F. Potts, "Construction Cost Management: Learning from Case Studies", Taylor & Francis, 2007.
2. Hojjat Adeli, Asim Karim, Asim Salimul Karim, "Construction Scheduling, Cost Optimization and Management", Taylor & Francis, 2001.
3. K. K. Chitkara, "Construction Project Management: Planning, Scheduling and Controlling", Tata Mc Graw-Hill Education, 2002.
4. Panagiotis E. Panagoulaki, "Value Engineering and Its Application to the Construction Industry", Massachusetts Institute of Technology, Department of Civil and Environmental Engineering, 2000.
5. Anthony J. Dell'isola, "Value engineering: practical applications --for design, construction, maintenance & operations", R. S. Means Company, 1997.

NOTE: The examiner is required to set eight questions in all and the candidates are required to attempt any five questions.

23

Sr. No.	Name of teacher	Department Name	Gender	Date of Birth	Highest Qualification	Date of Joining	Age	PAN	Regular/Contractual/Visiting/Other	Source of Record	Personal Details	Experience
1	Dr. Manoj Siwach	Economics	M	19.10.1970	Ph.D.	06.05.2005	47	AWUPS6144H	R	OVERALL	YES	24Y 8M
2	Dr. Abhey Singh	Economics	M	20.01.1972	Ph.D.	06.09.2008	46	AHPPG2100F	R	OVERALL	YES	17Y 5M
3	Sh. Rohdash Kumar	Economics	M	01.01.1982	NET	03.12.2007	36	ANAPR7087F	R	OVERALL	YES	10Y 11M
4	Dr. Rajbir Singh Dalal	Pub. Add.	M	03.04.1968	Ph.D.	04.04.2005	50	ACGPS7872N	R	OVERALL	YES	26Y 6M
5	Dr. Raj Kumar Siwach	Pub. Add.	M	02.03.1969	Ph.D.	17.09.2004	49	AFNPK0209B	R	OVERALL	YES	21Y
6	Dr. Vishnu Bhagwan	Pub. Add.	M	04.12.1977	Ph.D.	19.05.2001	40	AGDPB2931N	R	OVERALL	YES	18Y
7	Dr. Satyawan	Pub. Add.	M	03.04.1969	Ph.D.	13.09.2004	49	BBEPS1926F	R	OVERALL	YES	14Y
8	Dr. Sultan Singh	Pub. Add.	M	15.01.1972	Ph.D.	14.09.2004	46	BBEPS1927E	R	OVERALL	YES	14Y
9	Dr. Suresh Kumar Gahlawat	Biotech	M	20.08.1968	Ph.D.	19.12.2008	50	ABCPG8197K	R	OVERALL	YES	23Y
10	Dr. Raj Kumar Salar	Biotech	M	28.02.1968	Ph.D.	02.08.2004	50	AHKPK5991P	R	OVERALL	YES	20Y
11	Dr. Priyanka Siwach	Biotech	F	29.10.1974	Ph.D.	22.08.2007	43	ARBPS0793G	R	OVERALL	YES	17Y
12	Dr. Joginder Singh	Biotech	M	01.02.1968	Ph.D.	04.09.2004	50	AVVPS4256Q	R	OVERALL	YES	20Y 6M
13	Dr. Kawajit Singh	FST	M	17.11.1975	Ph.D.	29.10.2007	42	BRCPS6872E	R	OVERALL	YES	13Y
14	Ms. Sanju Bala	FST	F	02.05.1981	NET, SLET	29.10.2007	37	BTQPS6011M	R	OVERALL	YES	12Y
15	Ms. Manju Dhillon	FST	F	02.08.1981	Ph.D.	29.10.2007	36	ATRPM2600A	R	OVERALL	YES	11Y
16	Dr. Rani Devi	EBS	F	05.12.1975	Ph.D.	18.10.2004	42	AJPPD1755E	R	OVERALL	YES	14Y
17	Dr. Anju	EBS	F	06.07.1976	Ph.D.	29.10.2007	42	AIWPA1103C	R	OVERALL	YES	13Y
18	Dr. Mohd. Kashif Kidwai	EBS	M	07.02.1979	Ph.D.	05.11.2007	39	ALBPK2247B	R	OVERALL	YES	10Y 11M
19	Dr. Monika Verma	Physical Education	F	12.07.1972	Ph.D.	31.07.2004	46	ADFPV339P	R	OVERALL	YES	19Y
20		Physical Education	M	23.12.1974	Ph.D.	22.08.2007	45	ANLPR3972K	R	OVERALL	YES	17Y
21	Dr. Ravinder Pal Ahlawat	Physical Education	M	12.01.1975	Ph.D.	22.08.2007	43	AZHPRK7539A	R	OVERALL	YES	11Y 4M
22	Dr. Ashok Kumar Sharma	Physical Education	M	10.08.1972	Ph.D.	22.08.2007	45	AZHPRK7590H	R	OVERALL	YES	11Y 4M
23	Dr. Ashok Kumar Malik	Physical Education	M	11.10.1973	Ph.D.	15.10.2007	44	BTLPSS8444P	R	OVERALL	YES	15Y
24	Dr. Ishwer Singh Malik	Physical Education	M	16.06.1971	Ph.D.	28.07.2004	47	ADQPN3667F	R	OVERALL	YES	16Y
25	Dr. Meena Kumari	Education	F	02.10.1971	Ph.D.	22.08.2007	46	BCQPK2266M	R	OVERALL	YES	15Y 6M

-24-

26	Sh. Raj Kumar	Education	M	05.05.1976	Ph.D.	23.08.2007	42	AVYPPK8539L	R	OVERALL	YES	13Y
27	Dr. (Mrs.) Ranjeet Kaur	Education	F	21.03.1974	Ph.D.	04.09.2007	44	AZHPK0954B	R	OVERALL	YES	18Y
28	Dr. J.S. Jakhar	Law	M	28.12.1963	Ph.D.	26.10.2002	54	EXEPMTEED	R	OVERALL	YES	26Y
29	Sh. Mukesh	Law	M	05.07.1973	Ph.D.	28.10.2002	45	AKKPK1416E	R	OVERALL	YES	17Y
30	Dr. Rajesh Kumar Malik	Law	M	20.06.1969	Ph.D.	28.07.2004	55	AJZPM4467B	R	OVERALL	YES	15Y
31	Dr. Ashok Kumar	Law	M	26.04.1968	Ph.D.	29.07.2004	50	AASPM4109L	R	OVERALL	YES	15Y 3M
32	Dr. Vikram Singh	CSA	M	09.09.1967	Ph.D.	02.08.2004	50	ACPOS2363J	R	OVERALL	YES	23Y 8M
33	Dr. Dilbag Singh	CSE	M	24.04.1973	Ph.D.	01.12.2000	45	ARCPS2585D	R	OVERALL	YES	16Y 9M
34	Sh. Harish Kumar	CSA	M	20.06.1979	Ph.D.	28.07.2004	39	AKHPR8825P	R	OVERALL	YES	12Y 2M
35	Dr. Sultan Singh	Business Administration	M	20.10.1961	Ph.D.	11.04.2005	56	ACQPS8108R	R	OVERALL	YES	32Y
36	Dr. Arti Gaur	Business Administration	F	17.08.1977	Ph.D.	22.08.2007	40	AICPG3917A	R	OVERALL	YES	12Y 4M
37	Dr. Sanjeet Kumar	Business Administration	M	10.10.1979	Ph.D.	22.08.2007	38	AUEPT6959B	R	OVERALL	YES	11Y 1M
38	Sh. Rajneesh Ahlawat	Business Administration	M	11.04.1978	Ph.D.	23.08.2007	40	AHZPA7445F	R	OVERALL	YES	11Y 9M
39	Dr. Himani Sharma	Business Administration	F	09.02.1978	Ph.D.	04.10.2007						
40	Dr. D.P. Warne	Commerce	M	05.04.1968	Ph.D.	12.05.2005	50	AAJWP9139R	R	OVERALL	YES	27Y 4M
41	Dr. Surinder Kundu	Commerce	M	21.11.1974	Ph.D.	30.03.2005	44	AOOPK7342	R	OVERALL	YES	18Y 5M
42	Dr. Silender Singh	Commerce	M	01.03.1971	Ph.D.	31.03.2005	47	AZPSS3665P	R	OVERALL	YES	13Y 1M
43	Dr. Kapil Chaudhary	Commerce	M	20.11.1978	Ph.D.	22.08.2007	39	AGXPC2293A	R	OVERALL	YES	13Y 1M
44	Smt. Kamlesh Rani	Commerce	F	25.12.1982	NET	27.08.2007	35	ALSPR5777Q	R	OVERALL	YES	14Y
45	Dr. (Mrs.) Anu Shukla	English	F	30.03.1968	Ph.D.	24.08.2007	50	ABJPS3227K	R	OVERALL	YES	25Y 5M
46	Dr. Umed Singh	English	M	08.03.1967	Ph.D.	21.09.2004	51	AIBPS3187R	R	OVERALL	YES	21Y 11M
47	Dr. Deepit Dharmani	English	F	03.07.1962	Ph.D.	22.08.2007	56	ACHPD9632J	R	OVERALL	YES	33Y
48	Sh. Pankaj Sharma	English	M	13.08.1974	Ph.D.	23.08.2007	43	ADZPS2448G	R	OVERALL	YES	21Y 8M
49	Sh. Vitender Singh Chauhan	JMC	M	04.04.1974	MMC	19.03.2008						
50	Sh. Sewa Singh	JMC	M	04.03.1970	Ph.D.	23.07.2004	48	APXPS2258A	R	OVERALL	YES	21Y
51	Sh. Amit	JMC	M	25.04.1979	Ph.D.	22.08.2007	39	BMCPS1622R	R	OVERALL	YES	11Y
52	Sh. Ravinder	JMC	M	26.01.1973	Ph.D.	23.08.2007	45	ANLPR972K	R	OVERALL	YES	11Y
53	Dr. Aseem Miglani	Math	M	25.01.1967	Ph.D.	14.12.2007	51	AAAXPM6405C	R	OVERALL	YES	28Y
54	Ms. Neelam Kumari	Math	F	10.08.1980	Ph.D.	28.07.2004	37	AOTPK5793B	R	OVERALL	YES	15Y 3M

-85

55	Sh. Sandeep Kumar	Math	M	03.01.1979	NET	22.08.2007	39	APTPK3687B	R	OVERALL	YES	14Y 2M
56	Dr. Praveen Aghankar	Physics	M	28.06.1963	Ph.D.	05.10.2007	51	AHGPA1421L	R	OVERALL	YES	22Y 9M
57	Dr. Sushil Kumar	Physics	M	01.09.1968	Ph.D.	22.08.2007	49	AJXPK2821P	R	OVERALL	YES	21Y 9M
58	Ms. Rachna Malik	Physics	F	16.02.1985	Ph.D.	22.08.2007	33	AMUPR9791D	R	OVERALL	YES	11Y
59	Dr. Dharmvir Singh	Physics	M	29.11.1966	Ph.D.	22.08.2007	51	BANPS0784H	R	OVERALL	YES	14Y 2M
60	Dr. Raim Mehar Singh	Physics	M	06.07.1973	Ph.D.	22.08.2007	45	AQMPS1959G	R	OVERALL	YES	20Y
61	Dr. Harish Kumar	Chemistry	M	30.09.1975	Ph.D.	22.08.2007	42	ABTPH7215G	R	OVERALL	YES	14Y 2M
62	Mrs. Geeta Rathi	Chemistry	F	24.04.1972	Ph.D.	22.08.2007	46	ADNPR1516N	R	OVERALL	YES	11Y

SR. NO.	NAME OF THE ASSISTANT PROFESSOR (CONTRACTUAL)	FATHER'S NAME (S/SH.)	QUAL.	DEPARTMENT	DATE OF FIRST JOINING	Age	PAN	Regular/ Contract ual/Visit or/Other	Source of Record	Personal Details	Experience in YY-MM
1	SURESH KUMAR	RAM PHAI	NET	BIOTECHNOLOGY	31.10.2009	36	DTOPK8525 E	C	OVERALL	YES	7 Years 9 Months
2	YASHPAL GROVER	M.L. GROVER		BIOTECHNOLOGY	01.02.2018	42	Exempted	C	OVERALL	YES	4 Years 10 Months
3	SAMEESH KHUNGER	LOK NATH KHUNGER	NET	BUSINESS ADMINISTRATION	23.03.2010	33	Exempted	C	OVERALL	YES	8 Years 8 Months
4	SONIA	RAMESH CHANDER	NET	BUSINESS ADMINISTRATION	23.03.2010	29	GOUPS2047 B	C	OVERALL	YES	8 Years 8 Months
5	SACHIN SHARMA	KRISHAN SHARMA	NET	BUSINESS ADMINISTRATION	11.11.2011	31	BKJPS4410 G	C	OVERALL	YES	10 Years
6	PARVEEN	PURUSHOTAM	NET	BUSINESS ADMINISTRATION	01.08.2012	30	AYWPP6026 H	C	OVERALL	YES	6 Years 10 Months
7	ANKUR SANGWAN	DALIP SINGH	NET	BUSINESS ADMINISTRATION	03.08.2012	31	Exempted	C	OVERALL	YES	6 Years 4 Months
8	VIPIN KUMAR	VEERBHAN ARORA	NET	BUSINESS ADMINISTRATION	01.08.2012	28	DKEPK8010 F	C	OVERALL	YES	6 Years 4 Months
9	VIVEK JANGID	RADHEY SHYAM	NET	BUSINESS ADMINISTRATION	13.08.2013	30	AMXPD18047 P	C	OVERALL	YES	5 Years 4 Months
10	AMIT KUMAR	JAGDISH PARSAD	NET	BUSINESS ADMINISTRATION	13.08.2013	31	ELKPK5968 N	C	OVERALL	YES	5 Years 4 Months
11	SAHILA CHAUDHRY	SULTAN SINGH	Ph.D.	BUSINESS ADMINISTRATION	20.07.2017	29	ASMP C4129 N	C	OVERALL	YES	1 Year 12 days
12	DEEPIKA	DHARAMVEER	NET	CHEMISTRY	03.09.2015	28	AOJPD9107 N	C	OVERALL	YES	4 Years 2 Months
13	RAVITA	SATBIR SINGH	NET	CHEMISTRY	06.08.2013	28	Exempted	C	OVERALL	YES	5 Years
14	DEEPIKA RANI	ABNASH CHANDER	NET	CHEMISTRY	08.08.2013	35	Exempted	C	OVERALL	YES	5 Years
15	NEELAM	RAM PHAL MALIK	NET	CHEMISTRY	17.03.2015	30	ATSPN0823 F	C	OVERALL	YES	3 Years 8 Months
16	MONIKA	GURBACHAN SINGH	Ph.D/NET	COMPUTER SCIENCE & APPLICATIONS	15.09.2009	34	AXZPV9445 J	C	OVERALL	YES	8 Years 8 Months
17	SANGEETA RANI	KHUSHAL CHAND	Ph.D/NET	COMPUTER SCIENCE & APPLICATIONS	01.10.2010	33	BTRTR5129 L	C	OVERALL	YES	6 Years 4 Months
18	POONAM RANI	MAHENDER SINGH	NET	COMPUTER SCIENCE & APPLICATIONS	07.08.2013	27	ECAPK4542 M	C	OVERALL	YES	5 Years
19	SHAILJA KUMARI	KASHI RAM	NET	COMPUTER SCIENCE & APPLICATIONS	08.08.2013	29	ECAPK2384 B	C	OVERALL	YES	5 Years 11 Months
20	KULDEEP KUMAR	MAHENDER SINGH	NET	COMPUTER SCIENCE & APPLICATIONS	05.08.2013	33	DWJPK5782 H	C	OVERALL	YES	5 Years
21	PARDEEP SEELWAL	PREM SINGH	NET	COMPUTER SCIENCE & APPLICATIONS	08.08.2013	30	BKHP7143 P	C	OVERALL	YES.	5 Years

-21

S.R. NO.	NAME OF THE ASSISTANT PROFESSOR (CONTRACTUAL)	FATHER'S NAME (S./SH.)	QUAL.	DEPARTMENT	DATE OF FIRST JOINING	Age	PAN	Regular/ Contract ual/Visit or/Other	Source of Record	Personal Details	Experience in YY-MM
22	KAPIL KUMAR KASWAN	RAJENDER SINGH	PH.D	COMPUTER SCIENCE & APPLICATIONS	26.07.2012	36	AYQPK0825D	C	OVERALL	YES	5 Years 4 Months
23	DEEPIKA	SHER SINGH	NET	COMPUTER SCIENCE & APPLICATIONS	13.08.2014	27	DIEPS00083Q	C	OVERALL	YES	4 Years
24	AVININDER SINGH	SUKHDEV SINGH	NET	COMPUTER SCIENCE & APPLICATIONS	13.08.2014	32	CIEPSO214C	C	OVERALL	YES	6 Years 4 Months
25	GOPAL SHARMA	BALBIR SHARMA	NET	COMPUTER SCIENCE & APPLICATIONS	17.10.2014	35	BTLPS8383F	C	OVERALL	YES	4 Years
26	RAGHUVINDER	PAL A RAM	PH.D	COMPUTER SCIENCE & APPLICATIONS	30.07.2010	36	AYQPR9266A	C	OVERALL	YES	6 Years 2 Months
27	PRIYANKA	JAI KUMAR	NET	COMPUTER SCIENCE & APPLICATIONS	03.09.2015	28	CGJPP5520M	C	OVERALL	YES	4 Years
28	SHILPA JAIN	RAKESH JAIN	NET	COMPUTER SCIENCE & APPLICATIONS	29.09.2015	30	BXJPS3601P	C	OVERALL	YES	3 Years 1 Month
29	BAL KRISHAN	RAJ SINGH	NET	ECONOMICS	04.08.2010	41	Exempted	C	OVERALL	YES	8 Years 6 Months
30	SURENDER	HUKAM SINGH	NET	ECONOMICS	16.11.2006	33	BPQPS4774M	C	OVERALL	YES	12 Years 3 Months
31	KULDEEP SINGH	NIHAL SINGH	NET	ECONOMICS	05.08.2013	33	EDGPO5090N	C	OVERALL	YES	5 Years 3 Months
32	VIJAY KUMAR	BALBIR SINGH	PH.D	ECONOMICS	12.08.2014	30	Exempted	C	OVERALL	YES	4 Years
33	NEERU AHUJA	SUBHASH AHUJA	NET	ECONOMICS(COMPUTER SCIENCE)	05.09.2017	31	AXDPA1697F	C	OVERALL	YES	5 Years
34	RAMAN DEVI	BALBIR SINGH	NET	ECONOMICS	02.02.2017	30	CPD5782H	C	OVERALL	YES	4 Years 3 Months
35	MEENA KUMARI	BANWARI LAL	NET	EDUCATION	12.08.2013	43	ENNP4796R	C	OVERALL	YES	5 Years 3 Months
36	VINOD KUMAR	RAJ KUMAR	NET	EDUCATION	02.09.2014	33	CBWPK0398G	C	OVERALL	YES	4 Years
37	VANDANA	DILBAG SINGH	NET	EDUCATION	30.01.2018	36	AHHPV4484G	C	OVERALL	YES	7 Months
38	POONAM	AMAR SINGH	PH.D.	EDUCATION	30.01.2018	32	AZHPP4276G	C	OVERALL	YES	6 Years 8 Months
39	NEETU KHATRI	DAYANAND KHATRI	PH.D.	EDUCATION	30.01.2018	42	AVIPK8197H	C	OVERALL	YES	18 Years
40	INDU BALA	BHAJAN LAL	NET/PH.D.	EDUCATION	19.01.2017	30	CORPB4055H	C	OVERALL	YES	4 Months
41	SAROI BALA	HARPAL SINGH	PH.D/NET	EDUCATION	02.09.2014	39	BONPB7379R	C	OVERALL	YES	4 Years

-28

SR. NO.	NAME OF THE ASSISTANT PROFESSOR (CONTRACTUAL)	FATHER'S NAME (S./SH.)	QUAL.	DEPARTMENT	DATE OF FIRST JOINING	Age	PAN	Regular/ Contractual/Visit or/Other	Source of Record	Personal Details	Experience in YY-MM
22	KAPIL KUMAR KASWAN	RAJENDER SINGH	PH.D	COMPUTER SCIENCE & APPLICATIONS	26.07.2012	36	AYCPK0825	C	OVERALL	YES	5 Years 4 Months
23	DEEPIKA	SHER SINGH	NET	COMPUTER SCIENCE & APPLICATIONS	13.08.2014	27	DHEPS0083Q	C	OVERALL	YES	4 Years
24	AVININDER SINGH	SUKHDEV SINGH	NET	COMPUTER SCIENCE & APPLICATIONS	13.08.2014	32	CHFPS0214	C	OVERALL	YES	6 Years 4 Months
25	GOPAL SHARMA	BALBIR SHARMA	NET	COMPUTER SCIENCE & APPLICATIONS	17.10.2014	35	BTLPS8383F	C	OVERALL	YES	4 Years
26	RAGHUVINDER	PALA RAM	PH.D	COMPUTER SCIENCE & APPLICATIONS	30.07.2010	36	AYQPR9266	C	OVERALL	YES	6 Years 2 Months
27	PRIYANKA	JAI KUMAR	NET	COMPUTER SCIENCE & APPLICATIONS	03.09.2015	28	CGJPP5520	C	OVERALL	YES	4 Years
28	SHILPA JAIN	RAKESH JAIN	NET	COMPUTER SCIENCE & APPLICATIONS	29.09.2015	30	BXJPPS3601P	C	OVERALL	YES	3 Years 1 Month
29	BAL KRISHAN	RAI SINGH	NET	ECONOMICS	04.08.2010	41	Exempted	C	OVERALL	YES	8 Years 6 Months
30	SURENDER	HUKAM SINGH	NET	ECONOMICS	16.11.2006	33	BPQPS4774	C	OVERALL	YES	12 Years 3 Months
31	KULDEEP SINGH	NIHAL SINGH	NET	ECONOMICS	05.08.2013	33	EDGPPS0590	C	OVERALL	YES	5 Years 3 Months
32	VIJAY KUMAR	BALBIR SINGH	PH.D	ECONOMICS	12.08.2014	30	Exempted	C	OVERALL	YES	4 Years
33	NEERU AHUJA	SUBHASH AHUJA	NET	ECONOMICS/COMPUTER SCIENCE)	05.09.2017	31	AXDPA1697	C	OVERALL	YES	4 Years
34	RAMAN DEVI	BALBIR SINGH	NET	ECONOMICS	02.02.2017	30	CPDPD5782H	C	OVERALL	YES	4 Years 3 Months
35	MEENA KUMARI	BANWARI LAL	NET	EDUCATION	12.08.2013	43	ENNPk4796	C	OVERALL	YES	5 Years 3 Months
36	VINOD KUMAR	RAJ KUMAR	NET	EDUCATION	02.09.2014	33	CBWPK0398	C	OVERALL	YES	4 Years
37	VANDANA	DILBAG SINGH	NET	EDUCATION	30.01.2018	36	AHHPV4484	C	OVERALL	YES	7 Months
38	POONAM	AMAR SINGH	PH.D.	EDUCATION	30.01.2018	32	AZHPP4276	C	OVERALL	YES	6 Years 8 Months
39	NEETU KHATRI	DAYANAND KHATRI	PH.D.	EDUCATION	30.01.2018	42	AVIPK8197	C	OVERALL	YES	18 Years
40	INDU BALA	BHAJAN LAL	NET/PH.D.	EDUCATION	19.01.2017	30	CORPB4055	C	OVERALL	YES	4 Months
41	SAROJ BALA	HARPAL SINGH	PH.D/NET	EDUCATION	02.09.2014	39	BONPB7379	C	OVERALL	YES	4 Years

JR. NO.	NAME OF THE ASSISTANT PROFESSOR (CONTRACTUAL)	FATHER'S NAME (S/SH.)	QUAL.	DEPARTMENT	DATE OF FIRST JOINING	Age	PAN	Regular/ Contract ual/Visit or/Other	Source of Record	Personal Details	Experience in YY-MM
1	SURESH KUMAR	RAM PHAL	NET	BIOTECHNOLOGY	31.10.2009	36	DIOPK8525 E	C	OVERALL	YES	7 Years 9 Months
2	YASHPAL GROVER	M.L. GROVER		BIOTECHNOLOGY	01.02.2018	42	Exempted	C	OVERALL	YES	4 Years 10 Months
3	SAMEESH KHUNGER	LOK NATH KHUNGER	NET	BUSINESS ADMINISTRATION	23.03.2010	33	Exempted	C	OVERALL	YES	8 Years 8 Months
4	SONIA	RAMESH CHANDER	NET	BUSINESS ADMINISTRATION	23.03.2010	29	GOUPS2047 B	C	OVERALL	YES	8 Years 8 Months
5	SACHIN SHARMA	KRISHAN SHARMA	NET	BUSINESS ADMINISTRATION	11.11.2011	31	BKJPS4410 G	C	OVERALL	YES	10 Years
6	PARVEEN	PURUSHOTAM	NET	BUSINESS ADMINISTRATION	01.08.2012	30	AYWPP6026 H	C	OVERALL	YES	6 Years 10 Months
7	ANKUR SANGWAN	DALIP SINGH	NET	BUSINESS ADMINISTRATION	03.08.2012	31	Exempted	C	OVERALL	YES	6 Years 4 Months
8	VIPIN KUMAR	VEERBHAN ARORA	NET	BUSINESS ADMINISTRATION	01.08.2012	28	DKFPR8010 F	C	OVERALL	YES	6 Years 4 Months
9	VIVEK JANGID	RADHEY SHYAM	NET	BUSINESS ADMINISTRATION	13.08.2013	30	AMXP18047 P	C	OVERALL	YES	5 Years 4 Months
10	AMIT KUMAR	JAGDISH PARSAD	NET	BUSINESS ADMINISTRATION	13.08.2013	31	EIKPK5968 N	C	OVERALL	YES	5 Years 4 Months
11	SAHILA CHAUDHRY	SULTAN SINGH	Ph.D.	BUSINESS ADMINISTRATION	20.07.2017	29	ASMP4129 N	C	OVERALL	YES	1 Year 12 days
12	DEEPIKA	DHARAMVEER	NET	CHEMISTRY	03.09.2015	28	AOJPD9107 N	C	OVERALL	YES	4 Years 2 Months
13	RAVITA	SATBIR SINGH	NET	CHEMISTRY	06.08.2013	28	Exempted	C	OVERALL	YES	5 Years
14	DEEPIKA RANI	ABNASH CHANDER	NET	CHEMISTRY	08.08.2013	35	Exempted	C	OVERALL	YES	5 Years
15	NEELAM	RAM PHAL MALIK	NET	CHEMISTRY	17.03.2015	30	ATSPN0823 F	C	OVERALL	YES	3 Years 8 Months
16	MONIKA	GURBACHAN SINGH	PH.D/NET	COMPUTER SCIENCE & APPLICATIONS	15.09.2009	34	AXZPV9445 J	C	OVERALL	YES	8 Years 8 Months
17	SANGEETA RANI	KHUSHAL CHAND	PH.D/NET	COMPUTER SCIENCE & APPLICATIONS	01.10.2010	33	BTRTR5129 L	C	OVERALL	YES	6 Years 4 Months
18	POONAM RANI	MAHENDER SINGH	NET	COMPUTER SCIENCE & APPLICATIONS	07.08.2013	27	ECAPK4542 M	C	OVERALL	YES	5 Years
19	SHAILJA KUMARI	KASHI RAM	NET	COMPUTER SCIENCE & APPLICATIONS	08.08.2013	29	ECAPK2384 B	C	OVERALL	YES	5 Years 11 Months
20	KULDEEP KUMAR	MAHENDER SINGH	NET	COMPUTER SCIENCE & APPLICATIONS	05.08.2013	33	DWJPK5782 H	C	OVERALL	YES	5 Years
21	PARDEEP SEELWAL	PREM SINGH	NET	COMPUTER SCIENCE & APPLICATIONS	08.08.2013	30	BKHP7143 P	C	OVERALL	YES	5 Years

SR. NO.	NAME OF THE ASSISTANT PROFESSOR (CONTRACTUAL)	FATHER'S NAME (S/SH.)	QUAL.	DEPARTMENT	DATE OF FIRST JOINING	Age	PAN	Regular/ Contractual/Visit or/Other	Source of Record	Personal Details	Experience in YY-MM
42	PAWAN KUMAR	DHARAMPAL	NET	ENERGY & ENVIRONMENTAL SCIENCES	09.08.2010	37	Exempted	C	OVERALL	YES	9 Years
43	LAKHVIINDER SINGH	KEHAR SINGH	PH.D/NET	ENERGY & ENVIRONMENTAL SCIENCES	08.09.2016 (AN)	36	Exempted	C	OVERALL	YES	7 Years
44	AJOK KUMAR SARAN	RAM SARAN	NET	ENERGY & ENVIRONMENTAL SCIENCES	08.09.2016 (AN)	33	Exempted	C	OVERALL	YES	2 Years
45	SEEMA MIGLANI	J.C. MEHTA	PH.D	ENGLISH	26.08.2011	52	ABJPM8520 H	C	OVERALL	YES	21 Years 7 Months
46	VIKASH	RAMPHAL SINGH	NET	FOOD SCIENCE & TECHNOLOGY	07.09.2015	30	ATKPV5994 K	C	OVERALL	YES	4 Years
47	SNEH PUNIA	BIRBAL PUNIA	NET, PH.D.	FOOD SCIENCE & TECHNOLOGY	20.02.2017	31	Exempted	C	OVERALL	YES	1 Year 10 Months
48	BRJ LAL	SITA RAM	NET, PH.D.	FOOD SCIENCE & TECHNOLOGY	02.02.2018	32	Exempted	C	OVERALL	YES	11 Months
49	ANIL KUMAR SIROHA	RAMESHWAR DAYAL	NET, PH.D.	FOOD SCIENCE & TECHNOLOGY	30.01.2017	31	FIBPS0893F	C	OVERALL	YES	6 Months
50	SANDEEP KUMAR	LAL CHAND	NET/Ph.D.	GEOGRAPHY	27.07.2017 (AN)	32	CFPPK1978 B	C	OVERALL	YES	5 Years
51	MEENAKSHI	MANMOHAN SINGH	Ph.D.	GEOGRAPHY	28.07.2017	28	CGEPM4113 Q	C	OVERALL	YES	2 Years
52	SUNITA RANI	OM PARKASH	NET	HINDI	13.10.2017 (AN)	36	Exempted	C	OVERALL	YES	1 Year
53	RITU	OMVEER SINGH	Ph.D.	HISTORY & ARCHAEOLOGY	31.08.2017	41	BSIPRA6127 A	C	OVERALL	YES	6 Years
54	KRISHAN KUMAR	DALJIT SINGH	NET/Ph.D.	JOURNALISM & MASS COMMUNICATION	03.09.2009	36	BDBPK6384 K	C	OVERALL	YES	11 Years
55	VIKAS	SULTAN SINGH	NET	JOURNALISM & MASS COMMUNICATION	03.09.2009	33	DLIP57211H	C	OVERALL	YES	9 Years
56	RAM MEHAR	JAGAR SINGH	NET	JOURNALISM & MASS COMMUNICATION	03.08.2010	40	Exempted	C	OVERALL	YES	8 Years
57	TIMSAY MEHTA	BANSI DHAR MEHTA	NET/Ph.D.	JOURNALISM & MASS COMMUNICATION	16.10.2017 (AN)	35	CLLPM4930 P	C	OVERALL	YES	1 Year 3 Months
58	NARESH LATA	BALDEV K. SINGLA	NET	LAW	12.09.2006	43	ACPLL4351	C	OVERALL	YES	10 Years 5 Months
59	KISLAY CHAUDHAN	HUKAM CHAND	NET	LAW	02.08.2010	39	Exempted	C	OVERALL	YES	7 Years 6 Months

31

SR. NO.	NAME OF THE ASSISTANT PROFESSOR (CONTRACTUAL)	FATHER'S NAME (S./SH.)	QUAL.	DEPARTMENT	DATE OF FIRST JOINING	Age	PAN	Regular/ Contractual/Visit or/Other	Source of Record	Personal Details	Experience in YY-MM
60	VIKAS	BALBIR SINGH	NET	LAW	07.09.2015	25	Exempted	C	OVERALL	YES	3 Years 1 Month
61	NARENDER KUMAR	RAGHUBIR SINGH	NET	LAW	04.09.2015	33	Exempted	C	OVERALL	YES	3 Years 1 Month
62	RAKESH KUMAR	DHARAM SINGH	NET	LAW	14.01.2016	28	Exempted	C	OVERALL	YES	2 Years 10 Months
63	ANIL KUMAR	NASIB SINGH	NET	LAW	09.09.2016	36	BZLPK8233J	C	OVERALL	YES	2 Years 2 Months
64	JYOTSANA CHOUDHARY	GOVIND RAM CHOUDHARY	NET	LAW	11.01.2017	29	Exempted	C	OVERALL	YES	1 Year 1 Month
65	PRADEEP KUMAR	HARBHAJAN LAL	NET/Ph.D.	LAW	12.10.2017 (AN)	37	ARRPK6310R	C	OVERALL	YES	4 Years 3 Months
66	VAKEEL	RAM SWARUP	NET	LAW	13.10.2017						
67	SADHANA MITTAL	SEWAK RAM GUPTA	NET	LAW	17.01.2018	57	Exempted	C	OVERALL	YES	9 Months
68	NISHA RANI	ASHOK KUMAR	NET	LAW							
69	VINOD	PRITHVI SINGH	NET	MATHEMATICS	15.02.2018	35	Exempted	C	OVERALL	YES	4 Months
70	ANIL KUMAR	MOHAN LAL	NET	MATHEMATICS	05.08.2013	34	AMVPV648	C	OVERALL	YES	11 Years
71	PRIYADARSHAN	LAKSHVIR SINGH BENIWAL	NET	MATHEMATICS	07.09.2012						
72	POONAM DEVI	SATYAVIR SINGH	NET	MATHEMATICS (COMPUTER SCIENCE)	13.08.2014	28	Exempted	C	OVERALL	YES	4 Years 3 Months
73	SUNIL KUMAR	RAVI KUMAR	NET	MATHEMATICS (COMPUTER SCIENCE)	27.01.2016	30	Exempted	C	OVERALL	YES	2 Years 7 Months
74	NEELAM	VIJAY SINGH	NET	MATHEMATICS (COMPUTER SCIENCE)	05.08.2013	31	Exempted	C	OVERALL	YES	5 Years 3 Months
75	SARASWATI CHATURVEDI	DEVI SHANKAR CHATURVEDI	Ph.D.	MUSIC (VOCAL)	05.08.2013	38	Exempted	C	OVERALL	YES	5 Years 3 Months
76	KAPIL KUMAR	SHIV RAM	NET/Ph.D.	MUSIC (INSTRUMENT)	18.08.2017	35	Exempted	C	OVERALL	YES	1 Year 6 Months
77	RAJESH	RAMJI LAL	PH.D	PHYSICAL EDUCATION	22.08.2017	42	CHSPK8502	C	OVERALL	YES	1 Year
78	SHAMSHER KASNIA	UDAY PAL KASNIA	NET	PHYSICAL EDUCATION	16.09.2004	40	BKJPR5666P	C	OVERALL	YES	15 Years
79	SUMAN	RAM CHANDER BENIWL	PH.D/NET	PHYSICAL EDUCATION	22.08.2014	29	DHLPK4722	C	OVERALL	YES	4 Years 3 Months
80	DALJEET KUMAR	RAM KUMAR	NET	PHYSICAL EDUCATION	08.09.2016 (AN)	31	APTPB6888	C	OVERALL	YES	2 Years 2 Months
					12.09.2016	31	Exempted	C	OVERALL	YES	2 Years 2 Months

108

SR. NO.	NAME OF THE ASSISTANT PROFESSOR (CONTRACTUAL)	FATHER'S NAME (S./SH.)	QUAL.	DEPARTMENT	DATE OF FIRST JOINING	Age	PAN	Regular/ Contractual/Visit or/Other	Source of Record	Personal Details	Experience in YY-MM
81	SANDEEP DHULL	DEVINDER DHULL	NET	PHYSICAL EDUCATION	20.09.2016 (AN)	33	ASJPD2188D	C	OVERALL	YES	2 Years 2 Months
82	RAVINDER SINGH	R.P. DHANKHAR	PH.D.	PHYSICAL EDUCATION	20.02.2018	39	CRSPS0321M	C	OVERALL	YES	3 Years 8 Months
83	JAGDISH CHANDER	BIRBAL	PH.D	PHYSICAL EDUCATION (FOR DSW)	02.11.2011	41	BFOPC7982H	C	OVERALL	YES	13 Years
84	RAJNI	SURESH VATS	NET	PHYSICS	14.03.2016	31	BOJPR5220R	C	OVERALL	YES	
85	OM PARKASH	DHARAM CHAND	NET	PHYSICS	20.02.2017	34	Exempted	C	OVERALL	YES	
86	PRIYANKA	RAMESH CHANDER	PH.D.	PHYSICS	13.10.2017	30	BOQPP2Q11G	C	OVERALL	YES	1 Year 8 Months
87	AMREEK SINGH	GURMEET SINGH	PH.D.	PHYSICS	01.02.2018	33	DXLPPS6778C	C	OVERALL	YES	3 Years
88	CHARANJEET KAUR	HARI SINGH	NET/Ph.D.	PUNJABI	20.07.2017	41	BPSPK8929Q	C	OVERALL	YES	11 Months
89	HARDEV SINGH	KEHAR SINGH	NET	PUNJABI	18.01.2018	35	GIQPS9667H	C	OVERALL	YES	10 Years
90	RAMANDEEP	MADAN MOHAN	NET	SANSKRIT	20.07.2017	26	Exempted	C	OVERALL	YES	3 Years 1 Month
91	RAM DEV	RATI KUMAR	NET	SANSKRIT	24.07.2017	26	Exempted	C	OVERALL	YES	1 Year
92	MANDEEP KAUR	HARJWANT SINGH	NET	MATH, ECO., JMC (ENGLISH)	16.09.2014	27	Exempted	C	OVERALL	YES	1 Year
93	RAJNI RANI	JAGMAL SINGH	NET, PH.D.	LAW, JMC, MATH (HINDI)	03.04.2012	34	CBFPR8668M	C	OVERALL	YES	4 Years 3 Months
94	NIVATI CHAUDHARY	NARENDER CHAUDHARY	NET	UCDL (BUSINESS ADMINISTRATION)	29.08.2016	36	Exempted	C	OVERALL	YES	6 Years 7 Months
95	MANOJ BANSAL	PAWAN KUMAR	NET	UCDL (COMMERCE)	29.08.2016 (AN)	31	Exempted	C	OVERALL	YES	7 Years 6 Months
96	SANDEEP	KUMBHA RAM	NET	UCDL (COMPUTER SCIENCE)	31.08.2016 (AN)				OVERALL	YES	5 Years 3 Months
97	ASHOK KUMAR	KASHI RAM	NET	UCDL (ENGLISH)	31.08.2016 (AN)	28	Exempted	C	OVERALL	YES	4 Years
98	BHIM SINGH	RAGHUBIR SINGH	NET	UCDL (EDUCATION)	30.01.2018	38	Exempted	C	OVERALL	YES	6 Years