

NOTIFICATION

No. : 55 / 2017

Date: 17/ 6/2017

Subject : Continuation of Prospectus No.2017129 prescribed for M.Sc.(Mathematics) Part-I (Sem.I & II) and M.Sc.(Mathematics) Part-II (Sem.III & IV) for the Session 2017-18.

It is notified for general information of all concerned that the Prospectus of M.Sc. (Mathematics) Part-I (Sem.I & II) and M.Sc. Part-II.(Mathematics) (Sem.III & IV) bearing No. 2017129 prescribed for the Academic Session 2016-17 shall continue for the session 2017-18 along with the following additions/deletions as shown in Appendix-A appended with this notification respectively.

Appendix-A

Additions/Deletions to be made in the Prospectus/Syllabus of M.Sc.Part-I .(Mathematics) (Sem.I & II) and M.Sc. (Mathematics) Part-II (Sem.III & IV).

Sr.No.	Examination/subject/paper	Additions/Deletion/Substitution to be made in the Prospectus/Syllabus.
1	M.Sc. Part-I (Maths.) Sem-I Paper-I (101) Real Analysis	i) Following Text Book be added after Unit-V : Walter Rudin, Real and Complex Analysis, Tata McGraw Hill Publishing Co.Ltd., New Delhi. ii) The reference book mentioned at Sr.No. 17) be deleted. The Sr.Nos. appearing after 16) be renumbered.
2	M.Sc. Part-I (Maths.) Sem-I Paper-II (102) Advanced Abstract Algebra	i) Following Text Books be added after Unit-V : 1) Basic Abstract Algebra : P.B.Bhattacharya, S.K.Jani, S.R.Nagpaul. 2) A Course in Abstract Algebra : V.K.Khanna and Bhambri, Vikas Publication House Pvt.Ltd. (2010). ii) The reference books mentioned at Sr.Nos. 18) & 21) be deleted. The Sr.Nos. appearing from 19) be renumbered.
3	M.Sc. Part-I (Maths.) Sem-I Paper-III (103) Complex Analysis	i) Following Text Books be added after Unit-V : 1) Functions of One Complex Variable : J.B.Conway, Springer Verlag International Students Edition, Narosa Publishing House, 1980. 2) Foundation of Complex Analysis : S.Ponnusamy, Narosa Publishing House, 1967. ii) The reference books mentioned at Sr.No. 1) & 25) be deleted. The Sr.Nos. appearing from 2) be renumbered.
4	M.Sc. Part-I (Maths.) Sem-I Paper-IV (104) Topology-I	i) Following Text Book be added after Unit-V : Foundations of General Topology by William J. Pervin, Publisher : Academic Press. ii) The reference book mentioned at Sr.No. 1) be deleted. The Sr.Nos. appearing from 2) be renumbered.
5	M.Sc. Part-I (Maths.) Sem-I Paper-V (105) Differential Geometry (Optional)	i) Following Text Book be added after Unit-V : "An Introduction to Differential Geometry", By T .J.Wilmore, Oxford University Press (1959). ii) The reference book mentioned at Sr.No. 4) be deleted. The Sr.Nos. appearing after 3) be renumbered.
6	M.Sc. Part-I (Maths.) Sem-I Paper-V (106) Advanced Discrete Mathematics-I (Optional)	i) Following Text Book be added after Unit-V : J.P . Tremblay and R.Manohar , Discrete Mathematical Structure with Application to Computer Science, McGraw Hill Book Co. 1997. ii) The reference book mentioned at Sr.No. 1) be deleted. The Sr.Nos. appearing from 2) be renumbered.
7	M.Sc. Part-I (Maths.) Sem-II Paper-VI (201) Measure and Integration Theory	i) At the end of Unit-IV the contents "The L^p uniqueness of Extension, Completion of measure." be added. ii) The words and signs "The L^p uniqueness of Extension, completion of measure" be deleted from Unit-V. iii) Following Text Book be added after Unit-V : G .de Barra, Measure Theory and Integration. Wiley Eastern Limited, 1981. i) The reference book mentioned at Sr.No. 2) be deleted. The Sr.Nos. appearing after 1) be renumbered.

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Sr.No.	Examination/subject/paper	Additions/Deletion/Substitution to be made in the Prospectus/Syllabus.
8	M.Sc. Part-I (Maths.) Sem-II Paper-VII (202) Advanced Linear Algebra and Field Theory	i) Following Text Books be added after Unit-V : 1) P.B. Bhattacharya, S.K. Jain, S.R. Nagpaul, Basic Abstract Algebra. 2) I. N. Herstein, Topics in Algebra, Wiley Eastern Ltd., New Delhi, 1975. ii) The reference books mentioned at Sr.No. 1) & 22) be deleted. The Sr.Nos. appearing from 2) be renumbered.
9	M.Sc. Part-I (Maths.) Sem-II Paper-VIII (203) Integral Equations	i) Following Text Books be added after Unit-V : 1) Shanti Swaroop, Shiv Raj Singh, Integral equations. 2) M. D. Raisinghania, Integral equations and boundary value problems, S. Chand publication. ii) The reference book mentioned at Sr.No. 1) & 8) be deleted. The Sr.Nos. appearing from 2) be renumbered.
10	M.Sc. Part-I (Maths.) Sem-II Paper-IX (204) Topology-II	i) Following Text Book be added after Unit-V : William J. Pervin Foundation of General Topology, Publisher: Academic Press. ii) The reference book mentioned at Sr.No. 3) be deleted.
11	M.Sc. Part-I (Maths.) Sem-II Paper-X (205) Riemannian Geometry (Optional)	i) Following Text Book be added after Unit-V : T.J.Willmore .An Introduction in Differential Geometry ii) The reference book mentioned at Sr.No. 1) & 2) be deleted. The Sr.Nos. appearing from 3) be renumbered. iii) At the end of the reference books, following book be added. T.M.Karade, K.S.Adhav, S.D.Katore, V.G.Mete, M.S.Bendre, Elements of Riemannian Geometry, Sonu Nilu Einstein Foundation, International, 2015.
12	M.Sc. Part-I (Maths.) Sem-II Paper-X (206) Advanced Discrete Mathematics-II (Optional)	i) Following Text Book be added after Unit-V : J.R.Tremblay and R. Manohar , Discrete Mathematical Structure with Application to Computer Science, McGraw Hill Book Co., 1997. ii) The reference book mentioned at Sr.No. 2) be deleted. The Sr.Nos. appearing after 1) be renumbered.
13	M.Sc. Part-II (Maths.) Sem-III Paper-XI (301) Functional Analysis-I	i) Following Text Book be added after Unit-V : Kreyszig E. : Introductory Functional Analysis with Applications, John Wiley and Sons, New York, 1978. ii) The reference book mentioned at Sr.No. 9) be deleted.
14	M.Sc. Part-II (Maths.) Sem-III Paper-XII (302) Advanced Mechanics	i) The contents of Unit-I to Unit-V be substituted by the following contents. Unit-I : Legender transformations and the Hamilton equations of motion, cyclic coordinates and conservation theorems, the Hamiltonian formulation of Relativistic Mechanics, the equations and examples of canonical transformations. Unit-II : Poisson brackets and other canonical invariants, equations of motion, infinite decimal canonical transformation and conservation theorems in Poisson brackets formulation, the angular momentum Poisson brackets relation, symmetry group of mechanical system, Liouville's theorem. Unit-III : The Hamilton-Jacobi Equation for Hamilton's Principle function, The Harmonic Oscillator problem as an example of the Hamilton-Jacobi method, The Hamilton-Jacobi Equation for Hamilton's characteristic function, Separation of variables in the Hamilton-Jacobi equation. Ignorable coordinate and Kepler problem, Action angle variables in system of one degree of freedom, action angle variables for completely separable systems, the Kepler problems in action angle variables. Unit-IV : The Cayley-Klein parameters and related quantities, rate of change of vector, the Coriolis effect, the angular momentum and kinetic energy of motions about a point, The inertia tensor and moment of inertia, solving rigid body problem and Euler equations of motions, torque-free motion of rigid body, the heavy symmetrical top with one point fix. Unit-V : The Time-dependent Perturbation theory, Illustration of time dependent Perturbation theory, Time-independent Perturbation theory. ii) Following Text Book be added after Unit-V : H. Goldstein : Classical Mechanics (2 nd Edition), Narosa Publishing House, New Delhi. iii) The reference book mentioned at Sr.No. 5) be deleted. The Sr.Nos. appearing after 4) be renumbered.
15	M.Sc. Part-II (Maths.) Sem-III Paper-XIII (303) Operations Research	i) Following Text Book be added after Unit-V : Kantiswaroop, P.K. Gupta and Manmohan, Operations Research, Sultanchand and Sons, New Delhi, 2007. ii) The reference book mentioned at Sr.No. 9) be deleted.

Sr.No.	Examination/subject/paper	Additions/Deletion/Substitution to be made in the Prospectus/Syllabus.
16	M.Sc. Part-II (Maths.) Sem-III (304) Fluid Dynamics-I (Optional)	i) Following Text Book be added after Unit-V : F.Chorlton, Text Book of Fluid Dynamics, CBS Publishers, Delhi. ii) The reference book mentioned at Sr.No. 6) be deleted. The Sr.Nos. appearing after 5) be renumbered.
17	M.Sc. Part-II (Maths.) Sem-III (305) General Relativity (Optional)	i) Following Text Book be added after Unit-V : Introduction to General Relativity : Ronald Adler, Maurice Bazin, Menahem Schiffer, 2 nd Edition, McGraw Hill Co. ii) The reference book mentioned at Sr.No. 2) be deleted. The Sr.Nos. appearing after 1) be renumbered.
18	M.Sc. Part-II (Maths.) Sem-III (306) Differene Equations-I (Optional)	i) Following Text Book be added after Unit-V : Walter G., Kelley and Allan C. Peterson, Difference Equations : An Introduction with Applications, Academic Press, Inc. Harcourt Brace Joranovich Publishers, 1991. ii) The reference book mentioned at Sr.No. 5) be deleted.
19	M.Sc. Part-II (Maths.) Sem-III (307) Advanced Complex Analysis (Optional)	i) Following Text Book be added after Unit-V : J.B.Conway, Functions of One Complex Variable, Springer Verlag, International Students Edition, Narosa Publishing House, 1980. ii) The reference book mentioned at Sr.No. 25) be deleted.
20	M.Sc. Part-II (Maths.) Sem-III (308) Banach Algebra-I (Optional)	i) Following Text Book be added after Unit-V : C.E. Rickart, General Theory of Banach Algebras, V on Nostrand, 1960. ii) The reference book appearing at Sr.No. 3) be renumbered.
21	M.Sc. Part-II (Maths.) Sem-IV Paper-XVI (401) Functional Analysis-II	i) Following Text Book be added after Unit-V : Kreyszig E. : Introductory Functional Analysis with Applications, John Wiley and Sons, New York, 1978. ii) The reference book mentioned at Sr.No. 9) be deleted.
22	M.Sc. Part-II (Maths.) Sem-IV Paper-XVII (402) Partial Differential Equations	i) Following Text Book be added after Unit-V : T.Amarnath: an Elementary Course in Partial Differential Equations, 2 nd Edition, Narosa Publishing House, New Delhi. ii) The reference book mentioned at Sr.No. 4) be deleted. The Sr.Nos. appearing after 3) be renumbered.
23	M.Sc. Part-II (Maths.) Sem-IV Paper-XVIII (403) Numerical Analysis	i) Following Text Book be added after Unit-V : M.K. Jain, S.R.K. Iyengar and R.K.Jain, Numerical Methods- Problems and Solutions, Wiley Eastern Ltd., New Delhi, 1994. ii) The reference book mentioned at Sr.No. 3) be deleted. The Sr.Nos. appearing after 2) be renumbered.
24	M.Sc. Part-II (Maths.) Sem-IV (404) Fluid Dynamics-II	i) Following Text Book be added after Unit-V : F.Chorlton, Text Book of Fluid Dynamics, CBS Publishers, Delhi. ii) The reference book mentioned at Sr.No. 6) be deleted. The Sr.Nos. appearing after 5) be renumbered.
25	M.Sc. Part-II (Maths.) Sem-IV (405) Relativistic Cosmology (Optional)	i) Contents of Unit-V be substituted by the following contents. “Isotropic space, Space-time metric in the closed isotropic model, Space-time metric for the open isotropic model, The red shift, Gravitational stability of an isotropic universe, Homogeneous spaces.” ii) Following Text Books be added after Unit-V : 1) Introduction to General Relativity: Ronald Adler, Maurice Bazin, Menahem Schiffer. 2) The Classical Theory of Fields – I.D.Landav and E.M.Lifshitz, Pergamon Press, 1980. ii) The reference books mentioned at Sr.No. 1) & 4) be deleted. The Sr.Nos. appearing after 2) be renumbered.
26	M.Sc. Part-II (Maths.) Sem-IV (406) Difference Equations-II (Optional)	i) Following Text Book be added after Unit-V : Walter G., Kelley and Allan C. Peterson, Difference Equations : An Introduction with Applications, Academic Press, Inc. Harcourt Brace Joranovich Publishers, 1991. ii) The reference book mentioned at Sr.No. 3) be deleted.

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Sr.No.	Examination/subject/paper	Additions/Deletion/Substitution to be made in the Prospectus/Syllabus.
27	M.Sc. Part-II (Maths.) Sem-IV (407) Lie Groups (Optional)	i) Following Text Book be added after Unit-V : A.S. Sagle and R.E. Walde, Introduction to Lie Groups and Lie Algebras, Academic Press, 1973. ii) The reference book appearing from Sr.No. 3) renumbered.
28	M.Sc. Part-II (Maths.) Sem-IV (408) Banach Algebra-II (Optional)	i) Following Text Book be added after Unit-V : C.E. Rickart, General Theory of Banach Algebras, V on Nostrand, 1960. ii) The reference book appearing from Sr.No. 2) be renumbered.

Sd/-
(Dr.A.P.Deshmukh)
Registrar
Sant Gadge Baba Amravati University
