

PT – 101 METHODS IN MATHEMATICAL PHYSICS

Max. Marks: 85

Pass Marks: 29

Note: This paper has been divided into FIVE units. The paper will be set as per existing examination norms covering uniformly all the units and providing to the examinee sufficient choice in each unit.

Unit – I Tensor Analysis

Definition of Tensor and its rank, Transformation laws of covariant, contravariant and mixed tensors, Fundamental Operations with tensors (addition, subtraction and multiplication), Inner and outer product, Contraction of tensors, Associated tensors, Christoffel symbols, covariant differentiation of tensor

Unit – II Elements of Complex Variable

Functions of a complex variable, the derivative and the Cauchy-Riemann differential equations, line integrals of complex functions, Cauchy's integral theorem, Cauchy's integral formula, Taylor's series, Laurent's series, residues; Cauchy's residue theorem, singular points of an analytic function, evaluation of residues, Jordon-Lemma, evaluation of definite integrals..

Unit – III Theory of Fourier and Laplace Transforms

Fourier series analysis, evaluation of constants, Fourier sine, cosine and complex transforms, transforms of derivatives, Convolution theorem, Parseval's relation, Momentum representation of Fourier transform with Examples;
Laplace transforms (LT) of simple function, derivatives and integrals of functions, inverse Laplace transform, Application of Laplace transform.

Unit – IV Special Functions

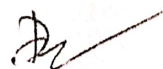
Singularity structure of a general second order homogeneous differential equation : ordinary points, regular and irregular points, indicial equation, The point at infinity, Series expansion method for solving differential equations, series solutions, Generating functions and recurrence relations and orthogonality of Legendre and Hermite polynomials

Unit – V Laplace's Equation and partial differential equations

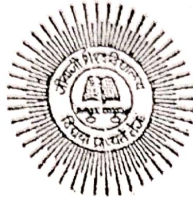
Laplace equation in polar, Cylindrical, and Spherical co-ordinate system, study state 2-D heat flow, Solution of 1-D wave equation using Fourier transform, Solution of heat equation by Fourier series, Solution of heat equation by Fourier transform.

BOOKS RECOMMENDED

- 1) Applied Mathematics for Engineers and Physicist: Pipes
- 2) Mathematical Physics: Harper
- 3) Advanced Engineering Mathematics: Erwing Kreyszig
- 4) Schaum Series for Transforms, Complex Variables and Tensors
- 5) Mathematical Methods: Arfken
- 6) Elements of Complex variables: Churchill



JIWAJI UNIVERSITY
GWALIOR



2020-2022

MASTER OF SCIENCE
ZOOLOGY

SYLLABUS

(2018-2020)

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28/9/18

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18/1/21

BOT 101: BACTERIOLOGY, VIROLOGY & GENERAL MICROBIOLOGY

UNIT I:

- Bacterial taxonomy;
- Identification of bacteria.
- General characters of *Rickettsia* and *Chlamydia*.
- Diseases caused by *Rickettsia* and *Chlamydia*
- Mode of nutrition in bacteria; autotrophy, heterotrophy, symbiosis.

UNIT II

- General account of sterilization culture media, pure culture techniques;
- A general idea about bacterial toxins and enzymes;
- Bacteriophage;
- Bacterial diseases: caused by *Escherichia coli*, *Shigella*.

UNIT III

- General properties and evolution of viruses;
- Cultivation of virus and viral assay;
- Transmission of plant viruses and control measures.
- Oncogenic viruses and tumorigenesis;
- Viral diseases: Encephalitis, Hepatitis AIDS and Rabies.

UNIT IV

- Biological nitrogen fixation: symbiotic and non symbiotic nitrogen fixation;
- Fermentation technology: principle and types of fermentation.
- Microbial degradation of pesticides and hydrocarbons.
- Mycoplasma: general account and important diseases caused by them.

UNIT V

- Microbial conversion of waste product with particular reference to alcohol and biogas
- General account of Immunity, properties of antigens and antibodies.
- Allergy and types of allergies.
- Mycotoxins and their harmful effects.

PRACTICALS 101:

1. Preparation of culture media.
2. Isolation of *Bacillus* and *Rhizobium* spp from soil and nodules.
3. Various methods of bacterial staining to study cell wall, endospore, capsule and flagella.
4. Identification of important genera by using biochemical tests: *Escherichia*, *Azotobacter*, *Staphylococcus*, *Bacillus*, *Pseudomonas*, *Rhizobium*, *Streptomyces*, *Xanthomonas*.
5. Construction of bacterial growth curve.
6. Quantitative estimation of bacteria in milk.
7. Isolation of streptomycin – resistant mutants of bacteria.
8. Sensitivity test of bacteria using different antibiotics.
9. Purification of TMV and study of thermal inactivation point and dilution point.
10. Virus concentration determination by local lesion on host.
11. Study of common vectors of plant virus: Nematodes, fungi and insects.
12. Bacteriophage isolation
13. Isolation and enumeration of bacteria, actinomycetes and fungi from soil, rhizosphere and seed using different techniques.
14. Use of selective media for isolating micro-organisms.
15. Fermentation of alcohol and biogas from waste materials (Demonstration)



7/2/21



①

जीवाजी विश्वविद्यालय, ग्वालियर
अध्ययन मण्डल द्वारा स्वीकृत पाठ्यक्रम
सत्र 2018-19 एवं 2019-20 2020-2022
एम.ए. इतिहास द्विवर्षीय (चार सेमेस्टर) पाठ्यक्रम

1. प्रथम सेमेस्टर

प्रथम प्रश्नपत्र - इतिहास दृष्टि, लेखन एवं विचारधाराएं

द्वितीय प्रश्नपत्र - 18वीं शताब्दी का विश्व

तृतीय प्रश्नपत्र - भारत का राजनैतिक इतिहास /

(क) प्राचीन भारत का इतिहास (प्रारंभ से 320 ई.पू.)

(ख) मध्यकालीन भारत एवं ~~प्रतिशोध~~ ^{राजनीति} का इतिहास (1190-1320 ई.)

(ग) औपनिवेशिक भारत का इतिहास (1740-1805 ई.) ✓

चतुर्थ प्रश्नपत्र - के अन्तर्गत कोई भी एक वैकल्पिक प्रश्नपत्र लिया जा सकेगा

(क) भारतीय इतिहास में नारी

(ख) ग्वालियर क्षेत्र का इतिहास (प्रारम्भ से 1950 ई. तक)

(ग) ~~बिचसों का इतिहास~~ पर्यटन में ~~इतिहास~~ ^{अनुप्रयोग}

(घ) मराठों का इतिहास (1626-1818) ^{ऐतिहासिक}

2. द्वितीय सेमेस्टर

प्रथम प्रश्नपत्र - इतिहास दृष्टि, लेखन एवं विचारधाराएं

द्वितीय प्रश्नपत्र - 19वीं शताब्दी का विश्व

तृतीय प्रश्नपत्र - भारत का राजनैतिक इतिहास

(क) प्राचीन भारत का इतिहास (320 ई.पू. से 319 ई. तक)

(ख) मध्यकालीन भारत एवं ~~प्रतिशोध~~ ^{राजनीति} का इतिहास (1320-1526 ई.)

(ग) औपनिवेशिक भारत का इतिहास (1805-1857 ई.)

चतुर्थ प्रश्नपत्र - के अन्तर्गत कोई भी एक वैकल्पिक प्रश्नपत्र लिया जा सकेगा


(क) भारतीय इतिहास में नारी


(ख) ग्वालियर क्षेत्र का इतिहास (प्रारम्भ से 1950 ई. तक)

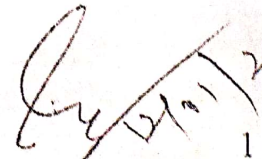
(ग) ~~बिचसों का इतिहास~~ पर्यटन में ~~इतिहास~~ ^{अनुप्रयोग}

(घ) मराठों का इतिहास (1626-1818) ^{ऐतिहासिक}

Mamta
12/01/2021


12.01.2021


12.01.2021


12/01/21

राष्ट्रीय कमलाराजा कन्हा स्नातकोत्तर स्वशासी महाविद्यालय ग्वालियर (म.प्र.)

उच्च शिक्षा विभाग म.प्र. शासन
स्नातक स्तर पर सेमेस्टर प्रणाली के अन्तर्गत एकल प्रश्न पत्र प्रणाली अनुसार पाठ्यक्रम
केन्द्रीय अध्ययन मण्डल द्वारा अनुमोदित तथा म.प्र. के महामहिम राज्यपाल द्वारा अनुमोदित
सत्र 2016-17 से प्रभावशील
2020-22

Department of Higher Education, Govt. of M.P.
Single Paper Pattern Syllabus for B.G. Classes Under Semester System
As recommended by Central Board of Studies and approved by the
Governor of M.P.
Effective from Session 2016-17—
2020-22

Max. Marks / अधिकतम अंक : 85

Particulars / विवरण

Class – M.A. (Previous) Paper I

Subject – Urdu

Paper Title – Ghazal

Semester – I

Max. Marks & Theory 42+8 CCE

नोट :- पर्चा पांच इकाईयो पर मुश्तमिल है;

Short Answer Questions/ लघु उत्तरीय प्रश्न

5X5 = 25

Long Answer Questions/ दीर्घ उत्तरीय प्रश्न

5X12 = 60

85

इकाई - 1 गज़ल और उसका फन

इकाई - 2 वली और उनकी गज़ल

इकाई - 3 मीर और उनकी गज़ल

इकाई - 4 ग़ालिब और उनकी गज़ल

इकाई - 5 शामिल - 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000

117

27/8/18

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DEPARTMENT OF HIGHER EDUCATION, GOVT. OF M.P.
Semester Wise Syllabus for Post Graduates
 As recommended by Central Board of Studies and Approved by HE the Governor of M.P.
 New syllabus Dec-2020

कक्षा : एम ए
 विषय : संस्कृत
 पेपर डाइटल : तृतीय
 सेमिस्टर : प्रथम

प्रथम प्रश्न-पत्र

कुल अंक : 85

इकाई-1	ऋग्वेद-सूक्त	17
	1. अग्नि 1.1	2. इमं 2.12
	3. विद्युत्प्रसव-वर्षा सन्नाह 3.33	4. वासु 10.125
	5. पर्वत 5.63	
इकाई 2	चार मंत्र लिए जायेंगे उनमें से किसी दो मंत्रों की परीक्षा प्रश्न-पत्र में ऋग्वेद सूक्त	
	1. तिरय्यमर्म 10.12	2. सवितो 10.125
	3. पुरुष 10.90	4. तिरय्य 10.12
इकाई 3	चार मंत्र लिए जायेंगे उनमें से किसी दो मंत्रों की परीक्षा प्रश्न-पत्र में - ऋग्वेद तथा यजुर्वेद के सूक्त -	17
	1. शिवसाह 1.12	2. शिवसाह 1.12
	3. यम 1.12	4. यम 1.12
इकाई-4	चार मंत्र लिए जायेंगे उनमें से किसी दो मंत्रों की परीक्षा प्रश्न-पत्र में - ब्राह्मण आरण्यक तथा ज्योतिष -	17
	1. शक्र मनसु मंत्राणु शक्येण ब्राह्मण 1.4.3.99	
	2. पुरुषोत्तमो जितुः आत्मानं 1.1.7	
	3. यम मन्त्राणां तैत्तिरीय आरण्यक 1.1.1	
	4. ईशान्यज्योतिष	
	इस इकाई में उपरोक्त सहायक सामग्री पर प्रश्न पूछे जायेंगे -	
	(इकाई सात अंकों के अंकों में पूछी जायेंगी विभागीय परीक्षा में प्रश्न पूछे जायेंगे)	
इकाई-5	ऐदिक साहित्य पर परीक्षायात्मक प्रश्न (दो प्रश्न पूछे जायेंगे किसी एक का उत्तर देना होगा)	
संस्कृतिका मंत्र	1. ऋग्वेदिक साहित्य पर परीक्षायात्मक प्रश्न 2. यजुर्वेदिक साहित्य पर परीक्षायात्मक प्रश्न	

K. Math

19

1st - Semester
1st Paper (Compulsory Paper)
Classical Sociological Tradition

Unit - 1 Historical Socio- Economic Background

1. A brief history of the development of social thoughts
2. Impact of industrial revolution on society and economy
3. The emergence and development of sociology

Unit-II August comte

1. Law of three stages
2. Hierarchy of sciences
3. Theory of positivism

Unit-III Karl Marx

4. Theory of Dialectical materialism
5. Materialistic interpretation of History.
6. Theory of class struggle

Unit-IV Durkheim

7. Theory of social facts
8. Theory of suicide
9. Theory of religion

Unit -V Max Weber

10. Theory of social action
11. Bureaucracy
12. Ideal type theory

AS

Department of Higher Education, Government of M.P.
Semester Wise Syllabus for Postgraduate
As recommended by Central Board of Studies and
Approved by HE the Governor of MP
Session 2020-2021

Class : M.A.
Semester : I
Subject : English Literature
Course : Poetry
Paper : I
Marks : 85
C.C.E.: 15

- Note :**
1. There shall be four compulsory papers in each semester. In all there will be eight compulsory papers in two semesters.
 2. Two essays type questions to be set from each unit and one to be attempted.
 3. All questions are compulsory. They carry equal marks.

Unit 1 : Annotations (Any two out of the four given passages at least one from each unit)

Unit 2 : Epic Poetry

John Milton :

Paradise Lost Book 1

Valmiki :

Ramayana (Sundarkand)

Unit 3 : Narrative Poetry

Geoffrey Chaucer :

The Prologue to the Canterbury Tales

S.T. Coleridge :

The Rime of the Ancient Mariner

Unit 4 : Renaissance Poetry

William Shakespeare :

Sonnets Nos: 23, 24, 26, 27, 31, 44

John Donne :

The Extasie, A Valediction Forbidden

Mourning, Love's Alchemie,

The Anniversarie

Unit 5 : Satirical Poetry

John Dryden :

Absolom and Achitophel

Alexander Pope :

An Essay on Man

Books Recommended :

Emile Legouis:

Chauaer

E.M.W. Tillyard:

Milton

Arther Comptol Rickett:

A History of English Literature

Daviv Daiches:

A History of English Literature

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Chairman BCS
Dr. A. S. Kushwah
Professor & Head
Dept. of English
S. L. P. Govt. College, Mor
Gwalior (M.P.)

Code No □1661

M.A. 1 Sem

2020-2022
2017-2018

Paper-1(Theory)

History of Eastern Art(Indian)

M.M.85

पूर्वोत्तरकला का इतिहास(भारत)

Unit-1 Per Historic painting of India(भारत की प्रागैतिहासिक चित्रकला)
Ajanta,(अजंता) Bagh(बाघ)

Unit-2 Mughal Painting, (मुगल पेन्टिंग)
Rajashthani (राजस्थानी)(Bundi-Kota,(बून्दी-कोटा)
Mewar, Kishangarh(मेवाड़, किशनगढ़)
Pahari school(पहाड़ी स्कूल) (Kangra, Basohli)(कंगड़ा, बसोली)

Unit-3 Indian Sculpture(भारतीय मूर्तिकला)
Mohan Jodaro and Harappa (मोहनजोदड़ो और हडप्पा)

Unit-4 Stupa (स्तूप) MAHABALIPURAM महाबलीपुरम
(Bharhut, Sanchi and Amravati)(भरहुत, सांची, और अमरावती)

Unit-5 Ellora, Khajuraho and Konark (ऐलोरा, खजुराहो और कोणार्क)

CCE=15

~~20-10-26~~ 24/10/2020

20/10/20

20/10/20

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30.6.17

एम.ए. संगीत
दो वर्षीय चार सेमेस्टर

Dance

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सत्र - 2020-21, 2021-2022

प्रत्येक सेमेस्टर में चार प्रश्न-पत्र होंगे। दो सैद्धांतिक दो प्रायोगिक होंगे जिसकी अंक समीक्षा सैद्धांतिक एवं प्रायोगिक 100 (85 प्रश्न पत्र 15 सी.सी.ई (सैद्धांतिक)) के होंगे। प्रायोगिक 100 का होगा।

प्रश्नपत्र क्रमांक	प्रथम सेमेस्टर
101	भारतीय नृत्य कला का इतिहास
102	निबंध लेखन और ताललिपि संरचना
103	वायवा (प्रायोगिक)
104	मंच प्रदर्शन (प्रायोगिक)
प्रश्नपत्र क्रमांक	द्वितीय सेमेस्टर
201	भारतीय नृत्य कला का इतिहास
202	निबंध लेखन और ताललिपि संरचना
203	वायवा (प्रायोगिक)
204	मंच प्रदर्शन (प्रायोगिक)
प्रश्नपत्र क्रमांक	तृतीय सेमेस्टर
301	भारतीय नृत्य कला का इतिहास
302	निबंध लेखन और ताललिपि संरचना
303	वायवा (प्रायोगिक)
304	मंच प्रदर्शन (प्रायोगिक)
प्रश्नपत्र क्रमांक	चतुर्थ सेमेस्टर
401	भारतीय नृत्य कला का इतिहास
402	निबंध लेखन और ताललिपि संरचना
403	वायवा (प्रायोगिक)
404	मंच प्रदर्शन (प्रायोगिक)

नोट :- परियोजना कार्य चतुर्थ सेमेस्टर में होगा।

JIWAJI UNIVERSITY, GWALIOR-474011
M.SC. BIOTECHNOLOGY

CURRICULUM -2019-2021 2020-22

Semester	Title of the Paper	Marks	
		EA	IA
First	101. Cell Biology	85	15
	102. Biomolecules and Metabolism	85	15
	103. Microbiology	85	15
	104. Bioinstrumentation	85	15
	105. Lab Course I	100	
	106. Lab. Course II	100	
Second	201. Molecular Biology	85	15
	202. Immuno-technology	85	15
	203. Enzyme-technology	85	15
	204. Part A: Environmental Biotechnology Part B: Animal Biotechnology	85	15
	205. Lab Course III	100	
	206. Lab Course IV	100	
Third	301. Genetic Engineering	85	15
	302. Plant Biotechnology	85	15
	303. Bioprocess Engineering and Microbial Technology	85	15
	304. Biostatistics and Computer Applications	85	15
	305. Lab Course V	100	
	306. Lab Course VI	100	
Fourth	401. Emerging Trends in Biotechnology	85	15
	402. Bioinformatics	85	15
	403. Lab Course VII : Technical/ Review writing	100	
	404. Project Work*	300	

*Evaluated both by the Internal & External examiner at the time of presentation. There shall not be compulsory project works during first three semesters. There are weekly seminars and continuous internal assessment throughout the course.

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Dr. D. S. Singh

JIWAJI UNIVERSITY, GWALIOR
M.A. (Economics)
SCHEME OF EXAMINATION
SESSION – 2020 – 2022

SEMESTER: I

PAPER CODE	COURSE
MA (ECO) 101	Micro Economic Analysis-I
MA (ECO) 102	Macro Economics
MA (ECO) 103	Public Economics
MA (ECO) 104	Quantitative Techniques

SEMESTER: II

PAPER CODE	COURSE
MA (ECO) 201	Micro Economic Analysis-II
MA (ECO) 202	Monetary Economics and Banking
MA (ECO) 203	Research Methods and Statistical Inference
MA (ECO) 204	International Economics

SEMESTER: III

PAPER CODE	COURSE
MA (ECO) 301	Economics of Growth and Development
MA (ECO) 302	Environmental Economics
MA (ECO) 303	One Optional paper from Group-A
MA (ECO) 304	One Optional paper from Group-A (Other than chosen earlier)

(M) _____ *SKSHM*

Program in Political Science
Session 2020-2021

(List of Courses of study according to semesters: Session 2020-2021)

First Semester

- 101- Political Philosophy I: Origins of Political Thought and Theory.
- 102- Indian Politics I: Institutions and Structures.
- 103- International Relations.
- 104- Public Administration: Ideas and Concepts.

Second Semester

- 201- Political Philosophy II: Modern Political Theory/Thought and Contemporary Ideologies.
- 202- Indian Politics II: Social and Political Process.
- 203- Indian Foreign Policy.
- 204- Comparative Politics.

Third Semester

- 301- Political Philosophy III: Modern Indian Political Thought.
- 302- Indian Politics III: State Politics in India.
- 303- Gandhian Political Philosophy and Action
- 304- Optional

Fourth Semester

- 401- Administrative Theory.
- 402- Human Rights
- 403- Research Methodology
- 404- Optional

Trivedi

02 May 2021

02 May 2021

mp.gov.in/npclisComp

Department of Higher Education Govt. of M.P.
Semester Wise Syllabus for Postgraduates
As recommended by Central Board of Studies
and approved by H.E. the Governor of M.P.
Session ~~2018-19~~ 2019-20-21

SEMESTER - I

M.A. / M.Sc. PREVIOUS
PAPER - I
Geomorphology

Course contents:-

Maximum marks 85

- Unit - 1 : Introduction of Geomorphology- Definition, Meaning, Nature and Scope, History of development of Geomorphology, Recent trends.
- Unit - 2 : Methods of study of landforms, Fundamental concepts - Geological structures and landforms - Evolution of landforms.
- Unit - 3 : Environmental change - Climatic change and geochronological methods, Morphogenetic Regions.
- Unit - 4 : Earth Movements - Epeirogenic, Orogenic and Cymatogenetic, Isostasy.
- Unit - 5 : Plate tectonics, Seismicity, Vulcanicity, orogenic structures with reference to evolution of Himalayas.

Suggested Readings:-

1. Chorley R.J.: . Spatial Analysis in Geomorphology Methuen, London, 1972
 2. Davis, W.M. : Geographical Essays, Dover, New York, 1964.
 3. Sharma, H.S. (ed.) : Perspectives in Geomorphology, Concept, New Delhi 1980
 4. Thornbury.W.D. : Principles of Geomorphology, John W.i ley, New York, 1960.
 5. Oliver, C.D. Weathering, Long man, London, 1979.
 6. Garner, H.F. The Origin of Landscape - A Synthesis of Geomorphology, Oxfork University Press, London, 1974.
 - 7- सिंह, सविन्द्र : भू आकृति विज्ञान, वसुंधरा प्रकाशन, मेरठ
 8. कौशिक, एस.डी. : भू आकृति विज्ञान, रस्तोगी, मेरठ
 9. शर्मा, हरिशंकर, प्रमिला कुमार : भू आकृति विज्ञान, म.प्र. हिन्दी ग्रंथ अकादमी, भोपाल
 10. मामोरिया और न्याति : भू आकृति विज्ञान, शिवलाल, आगरा
- रादौर भरतसिंह : भू-वैज्ञानिक संरचनाएँ, म.प्र. हिन्दी ग्रंथ अकादमी, भोपाल।

Syllabus approved for the semester Dec. ~~2019~~ 2020

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M.Sc. (Mathematics)

Session 2019-2020 - 2022

Semester-I

Math 101	Advanced Abstract Algebra	(85, 15)
Math 102	Analysis	(85, 15)
Math 103	Integral Transform	(85, 15)
Math 104	Computer Fundamentals and Programming in C	(85, 15)
Math 105	Practical lab: Practicals with programming in C	(100)

Semester-II

Math 201	Complex Analysis	(85, 15)
Math 202	Differential Equations	(85, 15)
Math 203	Topology	(85, 15)
Math 204	Numerical Methods	(85, 15)
Math 205	Practical lab: Practicals with Programming in C++	(100)

Semester-III

Math 301	Functional Analysis	(85, 15)
Math 302	Integral Equations and Boundary Value Problems	(85, 15)

Any two of the following

Math 303	Operations Research (optional)	(85, 15)
Math 304	Mathematical Biology (optional)	(85, 15)
Math 305	Advanced Numerical Methods (optional)	(85, 15)
Math 306	Practical lab: Practicals based on Optional papers offered by the students	(100)

Semester-IV

Math 401	Partial Differential Equations	(85, 15)
	<u>Any three of the following</u>	
Math 402	Advanced Functional Analysis (optional)	(85, 15)
Math 403	Wavelets (optional)	(85, 15)
Math 404	Mathematics of Finance & Insurance (optional)	(85, 15)
Math 405	Advanced Graph Theory (optional)	(85, 15)
Math 406	Advanced Mathematical Statistics (optional)	(85, 15)
Math 407	Discrete Mathematical Structures (optional)	(85, 15)
Math 408	Special Functions (optional)	(85, 15)
Math 409	Practical lab: Practicals based on Numerical Methods	(100)

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