



Faculty of Arts/Commerce/Science
University of Allahabad

Post Graduate Admission Test (PGAT) Session 2018-2019

Please visit auadmissions.com OR Admission-2018 link of www.allduniv.ac.in for
ONLINE application and more details.

| Important Event | Date(s) / Time |
|--|---|
| Opening Date of Online Registration | 20 th April, 2018 |
| Opening of Online Submission of Application Form | 20 th April, 2018 |
| Closing of Online Registration | 10 th May, 2018 |
| Closing of Deposition of Fee | 10 th May, 2018 |
| Closing of Online Submission of Application Form | 10 th May, 2018 |
| Opening of Downloading the Admit Cards Online | PGAT (I & II): 17 th May, 2018 |
| Date of Admission Test | PGAT (I & II): 24 th , 25 th & 26 th May, 2018 |

Post Graduate Admission Test (PGAT)- 2018

University of Allahabad, a premier Institute of learning and research, invites applications for following Post Graduate Courses to the students desirous for admissions to the courses for academic session 2018-19. PGAT Test is classified in Two Groups. **PGAT-I consisting of List-I to List-IV** is for conventional Subjects. **PGAT-II consisting of List-V** is for Specialized / Non-conventional Subjects.

List-I

Courses available for graduates in Humanities and Social Sciences

| Sl. No. | Subject |
|---------|--------------------------------|
| 1 | Ancient History |
| 2 | Economics |
| 3 | Education |
| 4 | English Literature / Language |
| 5 | Hindi |
| 6 | Med. & Mod. History |
| 7 | Music (Vocal, Sitar and Tabla) |
| 8 | Painting |
| 9 | Philosophy |
| 10 | Political Science |
| 11 | Sanskrit |



| | |
|----|-----------|
| 12 | Sociology |
| 13 | Urdu |

List-II

Courses available for graduates in Natural Sciences

| Sl. No. | Subject |
|---------|------------------|
| 1 | Botany |
| 2 | Chemistry |
| 3 | Physics |
| 4 | Zoology |
| 5 | Computer Science |

List-III

Courses available for graduates in Humanities and Science

| Sl. No. | Subject |
|---------|-----------------|
| 1 | Anthropology |
| 2 | Defence Studies |
| 3 | Geography |
| 4 | Mathematics |
| 5 | Psychology |
| 6 | Statistics |

List-IV

Courses available for graduates in Commerce & Law

| Sl. No. | Subject |
|---------|---------|
| 1 | M. Com. |

List-V

Courses available for Specialized / Non-conventional subjects

| Sl. No. | Subject |
|---------|---|
| 1. | M. Sc. Bio-Chemistry |
| 2. | M.Sc. in Agricultural Science (Agricultural Botany / Agricultural Chemistry & Soil Science / Agricultural Zoology & Entomology) |
| 3. | M. A. in Mass Communication |
| 4. | M. F. A. (Master in Fine Arts)* |
| 5. | M. P. A. (Vocal, Sitar, Tabla) |



| | |
|-----|--|
| 6. | M. A. in Film Theatre |
| 7. | Master in Development Studies (MDS) |
| 8. | M. Sc. In Material Science |
| 9. | M. Tech in Earth System Science |
| 10. | M. Sc. In Bioinformatics |
| 11. | M. Sc. Environmental Science |
| 12. | M. Sc. In Textile and Apparel Designing |
| 13. | M.Sc. In Design & Innovation in Rural Technology |
| 14. | M. P. Ed. (Physical Education)* |
| 15. | Applied Geology (Earth & Planetary Science) |
| 16. | M.A. in Women Studies |
| 17. | M.C.A. |

- **In all subjects, marked with star, students will have to undergo an additional test conducted by respective Departments. Final selection will be made on the basis of merit list based on combined marks i.e. total of marks obtained in PGAT-2018 (300 marks) and that obtained in Departmental Additional Test (150 marks).**

Very Important

For all the Courses, Eligibility Conditions are given below. Kindly study the Eligibility Conditions carefully before filling any Form.

- **Subject Candidates :**

For all Courses mentioned in List I to IV please remember that Applications can be made for only those subjects with whom a candidate has appeared/passed Graduate in any stream, Third Year Examination or Equivalent Examination. **No candidate is allowed to appear in any examination in which he/she has not appeared/passed at any stream of Graduation at Third Year.**

- **Non-Subject Candidates:**

Those students who wish to take admission in a subject in which they have not appeared/passed at Graduate in Final Year in any stream have an option to choose any one of the following subjects **(a) Hindi (b) English (c) Med. & Mod. History (d) Ancient History (e) Political Science (f) Philosophy (g) Education** she/he can indicate it at proper place in the form. But they cannot appear in PGAT examination in such subjects.

They may also apply for following **Non-subjects** with certain limitations:

(a) Sociology (b) Psychology provided they have 1st Division in any stream of Graduation i.e. 60% marks above.

They may also apply for **Economics subject provided they have Maths, Statistics at UG Level or had studied Economics upto B. A. - II Year.**



- **Eligibility:**

For subjects mentioned in List - V each student will have to apply in a separate Form. It is mentioned once again to kindly look into eligibility conditions of each course. There is no limit for number of Application Forms i.e. a student can apply in any course provided he/she fulfills eligibility conditions.

- **Sports Quota:**

Those players who have participated in the Inter University games or Open National or National Games or International Games by the respective Federations of the Sports event will be entitled for admission in the Post-Graduate Courses of the University, as per University Rules.

- **Minimum Qualifying Marks:**

All applicants belonging to General Category must obtain 30% of maximum marks of the test to qualify and get admission in the desired course. All applicants of OBC category must obtain 27% of maximum marks of the test to qualify and to get admission in the University. However, there is no qualifying mark for SC/ST category students.

- **Gap Year Deduction:**

In order to give preference to the candidates who have passed in the current academic session i.e. 2017-18, a deduction of 5% for each gap year would be levied up to a maximum of 15% of the obtained marks.

- **Test Pattern:**

Admission Test Paper will consist of **Multiple Choice Questions**. For each **correct answer 02 (two) marks** will be awarded and for every wrong answer **0.5 (Half) mark** would be deducted.

Note:

1. **First Fifty Questions will be of General Awareness, General English, General Hindi and Mental Ability. They are compulsory for each student.**
2. **There will be Two Set of 50 Questions related to Subjects which the candidate has offered.**
3. **If a candidate has offered only one subject he/she will have to solve 100 questions i.e. 50 Compulsory and 50 of the subject in 90 minutes. However the candidate who has offered two subjects he/she will have to solve 150 questions i.e. 50 compulsory 50 of one subject and 50 of second subjects in 120 minutes.**

Conduct of Test :

PGAT- Test will be held through Online and Offline both modes.

- The applicant must take due care while filling up the Online Application Form. The information provided by the applicant in his/her Online Application Form shall not be changed or altered in any case and the University will not entertain such request under



any circumstance. The University shall not be liable for any mistake made by the applicant.

- In case if the number of registered candidates at any of the examination centres are Twenty five (25) or less, then in such case the registered candidates will be allotted Allahabad Centre.
- There is no provision of revaluation/scrutiny of Answer copies.
- In case of any discrepancy in Hindi version, English version of the brochure will be treated as correct version.

Important Dates

| Exam Day | Date | Reporting Time | Exam Time | Course |
|----------|------------|----------------|--|--|
| Thursday | 24-05-2018 | 8.30 AM | 9.00 AM to 11.00 AM (excluding Anthropology & Bio Chemistry) | MA/M.Sc. |
| | | 9.00 AM | 9.30 AM to 11.00 AM (Candidates appearing in one Subject or Candidates with honors at graduation level) | MA/M.Sc. |
| Friday | 25-05-2018 | 8.30 AM | 9.00 AM to 11.00 AM | M.Sc. Ag. (Bot)/M.Sc. Ag. (Zoo/M.Sc. Ag. (Chem.), M.Com., MA/M.Sc. (Anthro), M.Sc.(Biochemistry) |
| | | 11.30 AM | 12.00 Noon to 2.00 PM | M.A. (Mass Communication) |
| Saturday | 26-05-2018 | 8.30 AM | 9.00 AM to 12.00 Noon (candidates who are appearing in two courses will not be allowed to leave the examination hall before 12.00 Noon) | M.Tech (ESS), M.Sc. (CBCS), M.Sc. (Material Science), M.Sc. (Bio- informatics) M.Sc. (Applied Geology), M.A. (Theater & Film) M.Sc. (Environmental Science) M.Sc. (Computer Science)/M.C.A., M.F.A., M.P.A. M.D.S., M.Sc. (Textile & Apparel Designing), M.A. (Women Studies), M.Sc. in Design & innovation in Rural Technology, M.P.Ed., |
| | | 9.30 AM | 10.00 AM to 12.00 Noon | (For the candidates who are appearing only in one of the above mentioned courses). |



कला संकाय / वाणिज्य संकाय / विज्ञान संकाय
इलाहाबाद विश्वविद्यालय, इलाहाबाद
परास्नातक प्रवेश परीक्षा (PGAT) प्रवेश सत्र 2018-2019

ऑनलाइन आवेदन एवं अधिक जानकारी के लिए कृपया auadmissions.com अथवा
Admission-2018 link of www.allduniv.ac.in का अवलोकन करें।

महत्वपूर्ण तिथियाँ

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|---|--|
| ऑनलाइन पंजीकरण का प्रारम्भ | 20 अप्रैल, 2018 |
| ऑनलाइन आवेदन पत्र जमा करने की प्रथम तिथि | 20 अप्रैल, 2018 |
| ऑनलाइन पंजीकरण की अन्तिम तिथि | 10 मई, 2018 |
| ऑनलाइन शुल्क जमा करने की अन्तिम तिथि | 10 मई, 2018 |
| ऑनलाइन आवेदन पत्र जमा करने की अन्तिम तिथि | 10 मई, 2018 |
| ऑनलाइन प्रवेश पत्र प्राप्त करने की तिथि | PGAT (I एवं II) 17 मई, 2018 |
| प्रवेश परीक्षा की तिथि | PGAT (I एवं II) 24, 25 एवं 26 मई, 2018 |

परास्नातक प्रवेश परीक्षा (PGAT) - 2018

शिक्षण एवं शोध में भारत का लब्ध-प्रतिष्ठित इलाहाबाद विश्वविद्यालय अकादमिक सत्र 2018-19 हेतु स्नातकोत्तर स्तर के विभिन्न पाठ्यक्रमों में प्रवेश हेतु विद्यार्थियों को आमन्त्रित करता है। सम्पूर्ण स्नातकोत्तर पाठ्यक्रमों की सूची निम्नवत है। स्मरण रहे कि समस्त पाठ्यक्रमों को दो भागों में विभक्त किया गया है PGAT-I जिसमें सूची I, II, III एवं IV में उल्लेखित पारम्परिक औपचारिक विषय सम्मिलित हैं, एवं PGAT-II जिसमें सूची V में उल्लेखित विशेषीकृत / गैर पारम्परिक विषय सम्मिलित हैं।

List-I

Courses available for graduates in Humanities and Social Sciences

| क्रमांक | विषय |
|---------|---|
| 1 | प्राचीन इतिहास (Ancient History) |
| 2 | अर्थशास्त्र (Economics) |
| 3 | शिक्षाशास्त्र (Education) |
| 4 | अंग्रेजी साहित्य / भाषा (English Literature / Language) |
| 5 | हिन्दी (Hindi) |
| 6 | मध्यकालीन एवं आधुनिक इतिहास (Med. & Mod. History) |
| 7 | संगीत (गायन, सितार एवं तबला) Music (Vocal, Sitar and Tabla) |



| | |
|----|-------------------------------------|
| 8 | चित्रकला (Painting) |
| 9 | दर्शनशास्त्र (Philosophy) |
| 10 | राजनीति शास्त्र (Political Science) |
| 11 | संस्कृत (Sanskrit) |
| 12 | समाजशास्त्र (Sociology) |
| 13 | उर्दू (Urdu) |

List-II

Courses available for graduates in Natural Sciences

| Sl. No. | Subject |
|---------|------------------------------------|
| 1 | वनस्पति विज्ञान (Botany) |
| 2 | रसायनशास्त्र (Chemistry) |
| 3 | भौतिकशास्त्र (Physics) |
| 4 | जीव विज्ञान (Zoology) |
| 5 | कम्प्यूटर साइंस (Computer Science) |

List-III

Courses available for graduates in Humanities and Science

| Sl. No. | Subject |
|---------|-------------------------------------|
| 1 | मानविकीशास्त्र (Anthropology) |
| 2 | प्रतिरक्षा अध्ययन (Defence Studies) |
| 3 | भूगोल (Geography) |
| 4 | गणित (Mathematics) |
| 5 | मनोविज्ञान (Psychology) |
| 6 | सांख्यिकी (Statistics) |

List - IV

Courses available for graduates in Commerce & Law

| Sl. No. | Subject |
|---------|--------------------|
| 1 | एम. काम. (M.Com.) |

List-V

Courses available for Specialized / Non conventional subjects

| Sl. No. | Subject |
|---------|---|
| 1 | एम.एससी. बायोकेमेस्ट्री (M.Sc. Bio-Chemistry) |
| 2 | एम.एससी. एग्रीकल्चरल साइंस (M.Sc. in Agricultural Science (Agricultural |



| | |
|----|---|
| | Botany / Agricultural Chemistry & Soil Science / Agricultural Zoology & Entomology) |
| 3 | एम.ए. जनसंचार (M.A. in Mass Communication) |
| 4 | मास्टर आफ फाइन आर्ट M.F.A. (Master in Fine Arts)*) |
| 5 | एम.पी.ए. (M.P.A. (Vocal, Sitar, Tabla)) |
| 6 | एम.ए. फिल्म थियेटर (M.A. in Film Theatre) |
| 7 | मास्टर आफ डेवलेपमेन्ट स्टडीज (Master in Development Studies (MDS)) |
| 8 | एम.एससी. मटीरियल साइंस (M.Sc. In Material Science) |
| 9 | एम.टेक. अर्थ सिस्टम साइंस (M.Tech. in Earth System Science) |
| 10 | एम.एससी. बायो-इनफार्मेटिक्स (M.Sc. In Bioinformatics) |
| 11 | एम.एससी. पर्यावरण विज्ञान (M.Sc. Environmental Science) |
| 12 | एम.एससी. टेक्सटाइल एवं एपरेल डिजाइन (M. Sc. In Textile and Apparel Designing) |
| 13 | एम. एस. सी. इन डिजाइन एवं इनोवेशन इन रूरल टेक्नोलोजी (M.Sc. in Design & Innovation in Rural Technology) |
| 14 | एम. पी. एड शारीरिक शिक्षा (M.P. Ed. (Physical Education)) |
| 15 | अप्लाइड जियोलोजी (Applied Geology (Earth & Planetary Science) |
| 16 | एम0 ए0 इन वूमन स्टडीज (M.A. in Women Studies) |
| 17 | एम. सी0 ए0 (M.C.A.) |

- पांचवी सूची (सूची V) में तारांकित विषयों में विद्यार्थियों को प्रवेश परीक्षा के अतिरिक्त संबंधित विभागीय परीक्षा में सम्मिलित होना अनिवार्य है। इन विषयों में अन्तिम प्रवेश, प्रवेश परीक्षा (अधिकतम अंक 300) एवं विभागीय परीक्षा (अधिकतम अंक 150) में प्राप्त प्राप्तांकों के योग के आधार पर निर्धारित मेरिट लिस्ट के अनुसार होगा।

महत्वपूर्ण

सभी पाठ्यक्रमों के लिए अर्हता शर्तें नीचे अभिलिखित हैं। कृपया आवेदन पत्र भरने से पूर्व शर्तों का विधिवत् अध्ययन करें।

प्रवेश परीक्षा हेतु विषय निर्धारण :

बी.ए. / बी.एस-सी. / बी.काम. या समकक्ष पाठ्यक्रमों के अन्तिम वर्ष में सम्मिलित या उत्तीर्ण आवेदक उन्हीं विषय / विषयों में परीक्षा देंगे जो विषय उसने उक्त पाठ्यक्रम के अन्तिम वर्ष



में पढ़े हैं। बी.ए. /बी.एस-सी. /बी. काम. के अन्तिम वर्ष में उसने जिस विषय का अध्ययन नहीं किया है, ऐसे किसी विषय में परीक्षा देने की अनुमति उसे नहीं होगी।

विषयेतर प्रवेश हेतु महत्वपूर्ण सूचना-

एम.ए. पाठ्यक्रम के कतिपय विषयों (1) हिन्दी, (2) अंग्रेजी भाषा/साहित्य (3) मध्य/आधु. इतिहास, (4) प्राचीन इतिहास, (5) राजनीति विज्ञान, (6) दर्शनशास्त्र, (7) शिक्षाशास्त्र, (8) प्रतिरक्षा अध्ययन में परास्नातक पाठ्यक्रम में प्रवेश हेतु वे छात्र भी आवेदन कर सकते हैं जिन्होंने स्नातक तृतीय वर्ष में उक्त वांछित विषय का अध्ययन नहीं किया है। उन्हें अपने आवेदन पत्र में अपेक्षित स्थान पर इसका उल्लेख करना आवश्यक होगा। किन्तु उन्हें विषयेतर विषय के रूप में चुने गये विषय में प्रवेश परीक्षा नहीं देनी है।

अधोनिर्दिष्ट विषयों में अभ्यर्थी कुछ विशेष उपबन्धों के अधीन विषयेतर प्रवेश हेतु आवेदन कर सकते हैं-

(क) (1) समाजशास्त्र, (2) मनोविज्ञान

आवेदक ने बी.ए. परीक्षा 60 प्रतिशत से अधिक अंकों के साथ उत्तीर्ण की है।

(ख) अर्थशास्त्र

उपबन्ध (1) यदि आवेदक ने स्नातक परीक्षा गणित और सांख्यिकी के साथ उत्तीर्ण की हो या (2) अर्थशास्त्र विषय का अध्ययन बी.ए. द्वितीय वर्ष तक किया हो।

तालिका (अ) में परिगणित विषयों हेतु पात्रता-

उक्त तालिका में से प्रत्येक वांछित हेतु पृथक आवेदन करना अनिवार्य है। इन विषयों में से प्रत्येक विषय की पात्रता तालिका अ में प्रदर्शित की गई है। इन विषयों में आवेदक के लिये आवेदन पत्रों की कोई सीमा निर्धारित नहीं है, अर्थात् आवेदक किसी एक या अधिक विषयों में आवेदन कर सकता है, यदि वह उक्त विषय के लिये अपेक्षित पात्रता धारित करता है।

न्यूनतम अर्हता अंक

आवेदक को निम्न तालिका के अनुसार परीक्षा में न्यूनतम अर्हता (कट आफ) अंक प्राप्त करना आवश्यक होगा-

| सामाजिक संवर्ग | न्यूनतम अर्हता अंक |
|----------------|--------------------|
| सामान्य | 30% |
| ओ. बी. सी. | 27% |
| एस-सी. एस-टी. | लागू नहीं |



पूर्व छात्रों हेतु प्राप्तांकों कटौती (गैप इयर डिडक्शन)-

वर्तमान सत्र 2017-18 में उत्तीर्ण आवेदकों को प्रवेश में प्राथमिकता प्रदान करने हेतु प्राप्तांक कटौती (डिडक्शन) व्यवस्था होगी, जिसके अनुसार प्रत्येक गैप वर्ष के लिये प्राप्तांक का 5% जो किसी भी स्थिति में 15% से अधिक नहीं होगा, अंक काटे जायेंगे और इस प्रकार अवशेष अंकों के आधार पर मेरिट प्रदर्शित की जायेगी।

स्पष्टीकरण :

1. एक गैप वर्ष पर कटौती : प्राप्तांक का 5%
2. दो गैप वर्ष पर कटौती : प्राप्तांक का 10%
3. तीन या अधिक गैप वर्ष पर कटौती : प्राप्तांक का 15%

प्रवेश परीक्षा पैटर्न

प्रवेश परीक्षा में बहुविकल्पीय प्रश्न पूछे जायेंगे। प्रत्येक सही उत्तर के लिये 2 अंक जोड़े जायेंगे तथा प्रत्येक गलत उत्तर पर 0.5 (आधा) अंक काटा जायेगा।

- (क) 50 प्रश्न सामान्य जागरूकता सामान्य अंग्रेजी, सामान्य हिन्दी एवं नागरिक क्षमता से सम्बन्धित होंगे। यह प्रश्न प्रत्येक अभ्यर्थी के लिए अनिवार्य है।
- (ख) जिन विषयों को अभ्यर्थियों ने चयन किये हैं उससे सम्बन्धित 50 प्रश्नों के 2 सेट होंगे।
- (ग) यदि अभ्यर्थी ने एक विषय का चयन किया है, तो उसे 100 प्रश्नों के उत्तर जिसमें 50 प्रश्न अनिवार्य एवं 50 प्रश्न विषय के 90 मिनट में देने हैं। जिन अभ्यर्थियों ने दो विषयों का चयन किया है, वे 150 प्रश्न 120 मिनट में करेंगे जिनमें 50 प्रश्न अनिवार्य, 50 प्रश्न एक विषय के एवं 50 प्रश्न दूसरे विषय के होंगे।

आनलाइन / आफलाइन विकल्प

- (1) पी.जी.ए.टी.-2018 की तालिका I से V तक प्रदर्शित विषयों में परीक्षा आनलाइन तथा आफलाइन दोनों प्रारूपों में सम्पन्न होगी, जिसमें से प्रत्येक आवेदक को अपने लिये निर्धारित प्रारूप का चुनाव करना आवश्यक है।

सावधानी : अभ्यर्थी को अपने फार्म को आनलाइन भरते समय अत्यन्त सावधानी बरतनी चाहिए। अभ्यर्थी जो जानकारी फार्म में भरते हैं उसमें किसी भी प्रकार का परिवर्तन सम्भव नहीं होगा। फार्म में दी गयी जानकारी में किसी प्रकार के परिवर्तन की प्रार्थना विश्वविद्यालय स्वीकार नहीं करेगा। विश्वविद्यालय अभ्यर्थी के द्वारा की गयी किसी त्रुटि का उत्तरदायी नहीं होगा।



केन्द्र निरस्तीकरण-

- यदि किसी केन्द्र पर 50 से कम अभ्यर्थी पंजीकृत होते हैं तो उस केन्द्र को निरस्त कर दिया जायेगा। ऐसे सभी अभ्यर्थियों को इलाहाबाद केन्द्र में हस्तान्तरित कर दिया जायेगा।
- उत्तर पुस्तिकाओं का पुनर्मूल्यांकन / स्कूटनी किसी भी दशा में सम्भव नहीं होगा।
- दिग्दर्शिका (विवरण पुस्तिका) में हिन्दी व अंग्रेजी रूपान्तरण में अन्तर होने पर अंग्रेजी रूपान्तरण को आधिकारिक माना जायेगा।

महत्वपूर्ण तिथियाँ

| Exam Day | Date | Reporting Time | Exam Time | Course |
|----------|------------|----------------|--|--|
| Thursday | 24-05-2018 | 8.30 AM | 9.00 AM to 11.00 AM (excluding Anthropology & Bio Chemistry) | MA/M.Sc. |
| | | 9.00 AM | 9.30 AM to 11.00 AM (Candidates appearing in one Subject or Candidates with honors at graduation level) | MA/M.Sc. |
| Friday | 25-05-2018 | 8.30 AM | 9.00 AM to 11.00 AM | M.Sc. Ag. (Bot)/M.Sc. Ag. (Zoo/M.Sc. Ag. (Chem.), M.Com., MA/M.Sc. (Anthro), M.Sc.(Biochemistry) |
| | | 11.30 AM | 12.00 Noon to 2.00 PM | M.A. (Mass Communication) |
| Saturday | 26-05-2018 | 8.30 AM | 9.00 AM to 12.00 Noon (candidates who are appearing in two courses will not be allowed to leave the examination hall before 12.00 Noon) | M.Tech (ESS), M.Sc. (CBCS), M.Sc. (Material Science), M.Sc. (Bio- informatics) M.Sc. (Applied Geology), M.A. (Theater & Film) M.Sc. (Environmental Science) M.Sc. (Computer Science) M.F.A., M.P.A. M.D.S., M.Sc. (Textile & Apparel Designing), M.A. (Women Studies), M.Sc. in Design & innovation in Rural Technology, M.P.Ed., |
| | | 9.30 AM | 10.00 AM to 12.00 Noon | (For the candidates who are appearing only in one of the above mentioned courses). |



Table - I
Master Chart for Seats in Post Graduate in Different Units

| Sl. | Subject | Code | Seats | | | | | | | | | | Total Seats* |
|-----|-------------------------------------|------|--------------|-----|--------------|------|----|--------------|----|-----|-----|----|-----------------|
| | | | AU | CMP | ADC | ISDC | JT | SSK | AK | SPM | HAM | RT | |
| 1. | Ancient History | 01 | 154 | 50 | 50 | 50 | - | 50 | - | 50 | - | - | 404 |
| 2. | Economics | 02 | 154 | - | 50 | 50 | 40 | - | - | - | - | - | 294 |
| 3. | Education | 03 | 31 | 50 | 50 | 50 | - | 50 | - | - | 50 | - | 281 |
| 4. | English Literature / Language | 04 | 262 | 50 | 50 | 50 | - | 50 | - | - | 50 | - | 512 |
| 5. | Hindi | 05 | 308 | 50 | 50 | 50 | - | 50 | - | - | - | 50 | 558 |
| 6. | Med. & Mod. History | 06 | 169 | 50 | 50 | 50 | - | - | - | - | 50 | - | 369 |
| 7. | Music (Vocal, Sitar and Tabla) | 07 | 31+23+3 1 | - | 25+25+2 5 | - | - | 25+25+2 5 | 20 | - | - | - | 255 |
| 8. | Painting | 08 | 31 | - | 25 | - | - | 25 | - | - | - | - | 81 |
| 9. | Philosophy | 09 | 154 | 50 | 50 | - | - | 50 | - | - | - | - | 304 |
| 10. | Political Science | 10 | 115 | 50 | 50 | 50 | - | - | 50 | 50 | - | 50 | 415 |
| 11. | Sanskrit | 11 | 177 | 50 | 50 | - | 50 | - | 50 | - | - | - | 377 |
| 12. | Sociology | 12 | 30+4 | - | - | 50 | - | 50 | 50 | - | 50 | - | 234 |
| 13. | Urdu | 13 | 137 | - | 25 | - | - | - | - | - | 50 | - | 212 |
| 14. | Botany | 14 | 62 | 40 | - | - | - | 40 | - | 40 | - | - | 182 |
| 15. | Chemistry | 15 | 108 | 40 | - | - | - | 40 | - | 40 | - | - | 228 |
| 16. | Physics | 16 | 62 | - | 40 | - | - | - | - | - | - | - | 102 |
| 17. | Zoology | 17 | 62 | 40 | - | - | - | 40 | - | 40 | - | - | 182 |
| 18. | Computer Science | 18 | 30 | - | - | - | - | - | - | - | - | - | 30 |
| 19. | Anthropology | 19 | 15+15 | - | - | - | - | - | - | - | - | - | 30 |
| 20. | Defence Studies | 20 | 23 | - | 50 | 30 | - | - | 30 | - | - | - | 133 |
| 21. | Geography | 21 | 115 | 30 | 50 | - | - | - | 50 | 40 | - | - | 285 |
| 22. | Mathematics | 22 | 185 | 40 | 40 | - | - | - | - | - | - | - | 265 |
| 23. | Psychology | 23 | 45 | - | 30 | - | - | - | - | - | - | - | 75 |



| Sl. | Subject | Code | Seats | | | | | | | | | | Total Seats* | |
|-----|---|------|----------|-----|-----|------|----|-----|----|-----|-----|----|-----------------|-----|
| | | | AU | CMP | ADC | ISDC | JT | SSK | AK | SPM | HAM | RT | | |
| 24. | Statistics | 24 | 31 | - | - | - | - | - | - | - | - | - | - | 31 |
| 25. | M. Com. | 25 | 269 | 50 | 50 | 50 | - | - | - | - | - | - | - | 419 |
| 26. | M. Sc. Bio-Chemistry | 26 | 22 | - | - | - | - | - | - | - | - | - | - | 22 |
| 27. | M.Sc. in Agricultural Science (Agricultural Botany / Agricultural Chemistry & Soil Science / Agricultural Zoology & Entomology) | 27 | 15+17+15 | - | - | - | - | - | - | - | - | - | - | 47 |
| 28. | M. A. in Mass Communication | 28 | 45 | | | | | | | | | | | 45 |
| 29. | M. F. A. (Master in Fine Arts)* | 29 | 06 | - | - | - | - | - | - | - | - | - | - | 06 |
| 30. | M.P.A. (Vocal, Sitar and Tabla) | 30 | 15+15+15 | | | | | | | | | | | 45 |
| 31. | M. A. in Film Theatre | 31 | 10 | - | - | - | - | - | - | - | - | - | - | 10 |
| 32. | Master in Development Studies (MDS) | 32 | 20 | | | | | | | | | | | 20 |
| 33. | M. Sc. In Material Science | 33 | 15 | - | - | - | - | - | - | - | - | - | - | 15 |
| 34. | M. Tech in Earth System Science | 34 | 15 | | | | | | | | | | | 15 |
| 35. | M. Sc. In Bioinformatics | 35 | 20 | - | - | - | - | - | - | - | - | - | - | 20 |
| 36. | M. Sc. Environmental Science | 36 | 19+12 | - | - | - | - | - | - | - | - | - | - | 31 |



| Sl. | Subject | Code | Seats | | | | | | | | | | Total Seats* | |
|-----|--|------|-------|-----|-----|------|----|-----|----|-----|-----|----|-----------------|----|
| | | | AU | CMP | ADC | ISDC | JT | SSK | AK | SPM | HAM | RT | | |
| 37. | M. Sc. In Textile and Apparel Designing | 37 | 10 | | | | | | | | | | | 10 |
| 38. | M. P. Ed.(Physical Education)* | 38 | 40 | - | - | - | - | - | - | - | - | - | - | 40 |
| 39. | Applied Geology (Earth & Planetary Science) | 39 | 15 | - | - | - | - | - | - | - | - | - | - | 15 |
| 40. | M. Sc. in Design and Innovation and Rural Technology | 40 | 15 | - | - | - | - | - | - | - | - | - | - | 15 |
| 41. | M.A. in Women Studies | 41 | 16 | - | - | - | - | - | - | - | - | - | - | |
| 42. | M.C.A. | 42 | 30 | - | - | - | - | - | - | - | - | - | - | |

* The Number of Seats may be increased or decreased as per the decision of the Academic Council.

INFORMATION BROCHURE

This brochure contains the following sections:

SECTION

- i. : General Information
- ii. : Admission Rules & Procedure
- iii. : Mode of the Entrance Test and Syllabus
- iv. : Information relating to the Admission Test

IMPORTANT NOTE

1. This information brochure is for the general guidance of the applicants. The admission Test and admission to the Post graduate degree courses shall be governed by the relevant provisions of the University of Allahabad Act, 2005 and the First Ordinances made under section 29(2) University of Allahabad Act, 2005.
2. The executive instructions of the Government of India, the regulations/norms issued by the UGC and the order/judgments of the Hon'ble Supreme Court of India and the



Hon'ble High Court at Allahabad shall be strictly followed with regard to reservation of seats in admission to the PG courses mentioned in the brochure.

3. Any subsequent change in the information brochure will be made available on the University Admission Test website ***auadmissions.com*** The admission to any PG course is suggestive of the fact that the terms and conditions laid down in the brochure are acceptable to the candidate and his/her legal guardian. The existing provisions of the Act, Statutes, Ordinances and Rules framed by the University of Allahabad and those modified from time to time shall be applicable to applicants. Any change in the rules, regulations, fee, special conditions, etc. shall mutatis mutandis apply to the admitted student.
4. The University of Allahabad reserves all the rights of conduct PGAT-2018 and any decision taken by the University in this regard shall be final and binding on all applicants.
5. **Ragging** in the University of Allahabad is strictly prohibited as per orders of the Hon'ble Supreme Court of India. The orders of Hon'ble Supreme Court have been communicated by the UGC letter no. FI-8/2006 (CPP-II) dated March 4, 2007. If any incident of ragging is reported it will invite stringent penal action according to law and as per directives of the Hon'ble Supreme Court of India.
6. This Brochure is being issued in Hindi and English versions, and in case there is any discrepancy between the two versions, the English version shall prevail.
7. The applicant is advised to get himself/herself photographed in such a manner, so that the photograph should bear the name of applicant clearly and size of photograph should not be more than the box specified in OMR Registration form. (3.5 cm. X 4.5 cm. Coloured photograph is essential)

SECTION-I

GENERAL INFORMATION

- 1.1 University of Allahabad shall conduct Post Graduate Admission Test, hereinafter called PGAT- 2018 for admission to various Post-Graduate courses/subjects of the University of Allahabad for the session 2018-19, as specified (along with their numerical codes and number of seats) in the TABLE-I on inner cover page of this Brochure. Admission will be made according to merit in the PGAT-2018, subject to fulfilling the eligibility requirements mentioned below and availability of seat in the particular course for which the candidate has applied for and appeared in the PGAT- 2018.

NOTE:

1. Candidates eligible to appear in the M.A. Admission Test, under the provisions of paragraph 1.2 and its sub-paragraphs and paragraph 1.6, must submit a single (i.e.,



- only one) Form for the M.A. Admission Test and shall not submit any form for the M.Com. and M.Sc. Admission Tests.
2. Candidates eligible to appear in the M.Com. Admission Test, under the provisions of paragraph 1.2 and its sub-paragraph and paragraph 1.6 must submit a single (i.e., only one) Form for the M.Com. Admission Test and shall not submit any Form for the M.A. and M.Sc. Admission Test.
 3. Candidates eligible to appear in the M.Sc. Admission Test, under the provisions of paragraph 1.2. and its sub-paragraph and paragraph 1.6 must submit a single (i.e. only one) Form for the M.Sc. Admission Test and shall not submit any Form for the M.A. and M.Com. Admission Test.
 4. Candidates appearing for the M.A. Admission Test may indicate on the Form their choice for admission in either the two subjects in which they have appeared at the B.A. Part III Examination or in their (single) main subject at the B.A. (Honours) Examination, under the provisions of paragraphs 1.3.1, 1.3.4 and 1.3.6 and also may indicate their choice for admission in two M.A. subjects for which they are eligible to be considered under the provisions of paragraph 1.4, as non-subject candidates but he/she has to appear in only two subjects studied in B.A. Part-III Examination.
 5. Candidates for the M.Com. Admission Test may (apart from M.Com.) indicate on the Form their choice for admission in two M.A. subjects for which they are eligible to be considered, under the provision of paragraph 1.4, as non-subject candidates. But he/she has to appear in only commerce subject.
 6. Candidates for the M.Sc. Admission Test may indicate on the Form their choice for admission in either the two subjects in which they have appeared at the B.Sc. Part III Examination or in their (single) main subject at the B.Sc. (Honours) Examination, under the provisions of paragraphs 1.3.3, 1.3.5 and 1.3.6 and also their choice for admission in up to two of the following : M.Com., M.Sc. in Defence Studies (in case Defence Studies was not one of their subjects in B.Sc. III examination or was not their main subject in the B.Sc. (Honours) and M.A. subjects for which they are eligible to be considered, under the provisions of paragraph 1.4, as non-subject candidates). (Test will be only in subject studied in B.Sc. III Year).
 7. Admission in M.A. (Arabic) and M.A. (Persian) will be done through merit amongst the eligible candidates. Intake capacity is 75 seats in each subject. The Admission Forms will be available separately from Registrar Office, University of Allahabad.
 8. Admission in M.Tech. (Electronics & Communication Engineering) & M.Tech. (Computer Science and Engineering) will be done on the basis of merit in GATE and qualifying graduation degree. Intake capacity is 15 seats in each. The Admission forms will be available separately from Registrar Office & at office of Department of Electronics & Communication, University of Allahabad in first week of July-2017.



TABLE-1

| Sl. No. | Subject | Code | Seats | See Eligibility Criteria as per the provisions of Paragraphs and Sub-paragraphs given against each subject |
|--|--------------------------------|------|-------|--|
| Courses Available for Graduates in Humanities and Social Sciences | | | | |
| 1 | Ancient History | 01 | 404 | 1.2, 1.4.1, 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 2 | Economics | 02 | 294 | 1.2, 1.4.1, 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 3 | Education | 03 | 281 | 1.2, 1.4.1, 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 4 | English Literature / Language | 04 | 512 | 1.2, 1.4.1, 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 5 | Hindi | 05 | 558 | 1.2, 1.4.1, 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 6 | Med. & Mod. History | 06 | 369 | 1.2, 1.4.1, 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 7 | Music (Vocal, Sitar and Tabla) | 07 | 255 | 1.2, 1.2.7 |
| 8 | Painting | 08 | 81 | 1.2, 1.2.6 (A), 1.2.6(B) |
| 9 | Philosophy | 09 | 304 | 1.2, 1.4.1, 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 10 | Political Science | 10 | 415 | 1.2, 1.4.1, 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 11 | Sanskrit | 11 | 377 | 1.2 |
| 12 | Sociology | 12 | 234 | 1.2 |
| 13 | Urdu | 13 | 212 | 1.2 |
| Courses Available for Graduates in Natural Sciences | | | | |
| 1 | Botany | 14 | 182 | 1.2, 1.2.5 |
| 2 | Chemistry | 15 | 228 | 1.2, 1.2.5 |
| 3 | Physics | 16 | 102 | 1.2, 1.2.5 |
| 4 | Zoology | 17 | 182 | 1.2, 1.2.5 |
| 5 | Computer Science | 18 | 30 | 1.2.1, 1.2.14 |
| Courses Available for Graduates in Humanities and Science | | | | |
| 1 | Anthropology | 19 | 30 | 1.2.1, 1.2.9 |
| 2 | Defence Studies | 20 | 133 | 1.2, 1.2.5, 1.4.1, 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 3 | Geography | 21 | 285 | 1.2, 1.2.5 |
| 4 | Mathematics | 22 | 265 | 1.2, 1.2.5 |
| 5 | Psychology | 23 | 75 | 1.2, 1.4.1(a), 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 6 | Statistics | 24 | 31 | 1.2, 1.2.5, 1.2.8 |



| Courses Available for Graduates in Commerce and Law | | | | |
|---|---|----|-----|---|
| 1 | M. Com. | 25 | 419 | 1.2.2, 1.2.4 |
| Courses Available for Specialized / Non-Conventional Subjects | | | | |
| 1 | M. Sc. Bio-Chemistry | 26 | 22 | 1.2.1, 1.2.10, 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 2 | M.Sc. in Agricultural Science (Agricultural Botany / Agricultural Chemistry & Soil Science / Agricultural Zoology & Entomology) | 27 | 47 | 1.2.1, 1.2.11, 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 3 | M. A. in Mass Communication | 28 | 45 | 1.2.1, 1.2.13, 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 4 | M. F. A. (Master in Fine Arts)* | 29 | 26 | 1.2.2, 1.2.18, 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 5 | M. P. A. (Vocal, Sitar, Tabla) | 30 | 45 | 1.2.1, 1.2.12(A), 1.2.12(B), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 6 | M. A. in Film Theatre | 31 | 10 | 1.2.2, 1.2.24, 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 7 | Master in Development Studies (MDS) | 32 | 20 | 1.2.2, 1.2.19, 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 8 | M. Sc. In Material Science | 33 | 15 | 1.2, 1.4.1(c), 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 9 | M. Tech in Earth System Science | 34 | 15 | 1.2.2, 1.2.20, 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 10 | M. Sc. In Bioinformatics | 35 | 20 | 1.2, 1.4.1(b), 1.4.1(d), 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 11 | M. Sc. Environmental Science | 36 | 31 | 1.2.2, 1.2.21, 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 12 | M. Sc. In Textile and Apparel Designing | 37 | 10 | 1.2.2, 1.2.22, 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 13 | M. P. Ed. (Physical Education) | 38 | 40 | 1.2.2, 1.2.23, 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 14 | Applied Geology (Earth & Planetary Science) | 39 | 15 | 1.2.1, 1.2.15, 1.4.2, 1.4.3, 1.4.4, 1.4.5 |
| 15 | M.Sc. In Design & Innovation in Rural Technology | 40 | 15 | 1.2.25 |
| 16 | M.A. in Women Studies | 41 | 16 | 1.2.16 |
| 17 | M.C.A. | 42 | 30 | 1.2.17 |

- 1.2 **Eligibility** : Candidates who have appeared/passed the Qualifying Graduate Examination i.e. the B.A./B.Sc./B.Com. (Three Year Degree Course) Examination of the University of Allahabad or BA/B.Sc./B.Com. (Three Year Degree Course or Honours Course) Examination of a University/ Institution recognized in this regard by



the UGC, or an Examination recognized by the University of Allahabad as equivalent there to are eligible to appear for the M.A./M.Com./M.Sc. Admission Test (PGAT-2018) respectively subject to the further provisions regarding eligibility given in the following sub-paragraphs (1.2.2 to 1.2.8).

- 1.2.1 The eligibility requirements for the Admission Tests for M.A./M.Sc. in Anthropology, M.Sc. in Bio-Chemistry, M.Sc. in Agricultural Sciences, M.P.A. (Vocal/Sitar/Tabla), M.A. in Mass Communication, M.Sc. in Computer Science and M.Sc. in App. Geology are given in subparagraphs 1.2.2 and 1.2.9 to 1.2.15.
- 1.2.2 The Candidature of a candidate (and the admission granted on that basis) shall stand cancelled at any stage in case the candidate is found to be ineligible for appearing in the Admission Test.
- 1.2.3 For admission to M.A. (in subjects other than Anthropology), the candidate should have passed the B.A. Part III Examination in the same subject in which admission is sought or the B.A. (Honours) Examination with the same subject in which admission is sought as the main subject. In some subjects, certain candidates shall be eligible for admission as Non-subject candidates under the provisions specified in paragraph 1.4 and its sub paragraphs, provided they have indicated in the Form their choice for begin considered as Non subject candidates for these subjects. Candidates desirous of admission to M.A. in Painting, Music and Statistics must also see sub-paragraphs 1.2.6, 1.2.7 and 1.2.8.
- 1.2.4 For admission to M.Com., the candidate should have passed the B.Com./B.Sc./B.Sc. (Honours) Examination.
- 1.2.5 For admission to M.Sc. (in subjects other than Earth & Planetary Science (Geology), Anthropology, Bio-Chemistry and Computer Science), the candidate should have passed the B.Sc. Part III Examination in the same subject in which admission is sought or the B.Sc. (Honours) Examination with the same subject in which admission is sought as the main subject. Candidates desirous of admission to M.Sc. in Statistics must also see paragraph 1.2.8.
- 1.2.6 (A) For admission to M.A. in Painting, candidates who have passed the B.F.A. (Four Year Course) or the B.V.A. (Four Year Course) Examination are also eligible.
- 1.2.6(B) For admission in M.A. in Painting, candidate has to appear in Practical Test of 100 marks (a) Life Drawing - 120 minutes of 50 marks in any medium (b) Portrait - 120 minutes of 50 marks of water colour. The Practical Test will be conducted by the Visual Arts Department on dates which will be announced later by the department. The candidates are advised to contact the Head, Visual Arts Department for details of practical test.
- 1.2.7 Only Female candidates are eligible for admission to M.A. in Music (Vocal/Sitar / Tabla). Candidates who have passed the Sangeet Praveen / Alankar / Nipun



Examination recognized by the University as equivalent to the B.A. Examination in Music are also eligible for admission to M.A. in Music.

- 1.2.8 For admission to M.A./M.Sc. in Statistics, if seats remain vacant after the admission of all eligible candidates who have passed the Qualifying Graduate Examination with Statistics, candidates who have passed the B.A./B.Sc. Part III Examination with Mathematics as a subject, with Statistics as a subject up to at least B.A./B.Sc. (Part II) Examination, or have passed the B.A./B.Sc. (Honours) Examination with mathematics as the main subject and Statistics as a subsidiary subject, may also be considered for admission on the basis of merit.
- 1.2.9 For admission to M.A./M.Sc. in Anthropology, candidates who have passed the B.A. Part III Examination with two subjects out of the set of the Social Sciences streams consisting of History, Political Science, Economics, Sociology, Psychology and Geography or the B.A./B.Sc. (Honours) Examination with Anthropology or a subject of the above mentioned Social Sciences stream as the main subject, or the B.Sc./B.Sc. (Honours) in Botany and Zoology Examination shall be eligible.
- 1.2.10 For admission to M.Sc. in Bio-Chemistry, candidates who have passed the B.Sc. Part III Examination with Chemistry/ Biochemistry as one subject and Botany/ Physiology / Zoology / Biotechnology / Microbiology/Industrial Fish and Fisheries as the other subject, or the B.Sc. (Honours) Examination with Chemistry / Biochemistry / Botany / Physiology / Zoology / Biotechnology/Microbiology as the main/subsidiary subject (Chemistry/Biochemistry being preferably the main subject), or the M.B.B.S. Examination are eligible but candidates who have passed the MBBS Examination, are exempted, under paragraph 1.5.3 from the Admission Test.
- 1.2.11 For admission to M.Sc. in Agricultural Science (Agricultural Botany/Agricultural Chemistry & Soil Science/Agricultural Zoology & Entomology) only those candidates are eligible who have passed the B.Sc. (Agriculture) Examination (Four-Year Course).
- 1.2.12 (A) For admission to M.P.A. (Vocal/Sitar/Tabla) both female and male candidates, who have passed the B.A. Music (Three Year Course) Examination or the B.A. Part III Examination with Music as one of the subjects, or the B.A. (Honours) Examination with Music as the main subject, or the Sangeet Praveen/Alankar/ Nipun (or similar) Examination recognized by the University as equivalent to the B.A. Examination in Music are eligible.
- (B) The Department of Music and Performing Arts shall also conduct a mandatory Practical Test of 100 marks for the candidate who appeared in the Admission Test for M.A. Music and M.P.A. The practical test will be conducted by the Music Department and the test will be held on dates which will be announced later by the department of Music. Candidates who



appeared in Theory Test are advised to contact the Head, Department of Music, University of Allahabad for details of Practical Test.

1.2.13 For admission to M.A. in Mass Communication, the Graduates of all subjects are eligible.

1.2.14 For admission to M.Sc. in Computer Science, a candidate is required to have passed B.Sc. (Three Years Degree Course) / B.Sc. (Honors) with Computer Science/Computer Maintenance / Computer Application / Information Technology as one of his/her subjects at least up to B.Sc. Part II level.

1.2.15 For admission to M.Sc. in Applied Geology the eligibility conditions shall be as following : A candidate who has passed B.Sc. (Three Year Degree Course) with any two of the following subjects up to B.Sc. Part II level are eligible, (i) Physics (ii) Mathematics (iii) Geology. Candidate has to appear in any two of the above subjects for test.

1.2.16 A student seeking admission to M.A. Women studies must have obtained/appeared in a Bachelors degree from an accredited institution/University.

1.2.17 For Admission in MCA course of Department of Electronics and Communication, A candidate who holds the bachelor's degree in science (B.Sc.) or equivalent degree from a recognized university with Maths/Computer Science as one of the subject upto IInd Year of B.Sc. Degree **Or** A Candidate who holds the BCA (Bachelor of Computer Applications)/BIT (Bachelor of Information Technology) degree of full time three years duration from a recognized University **OR** A Candidate who holds B.Tech./BE degree form recognized University.

Note: There will be a combined admissions test for M.Sc. Computer Science and MCA. Merit list for candidates will be prepared on the basis of their marks obtained in the Post Graduate Admission Test (PGAT) of University of Allahabad.

1.2.18 For admission to M.F.A. (Master in Fine Arts), a candidate is required to have B.F.A. degree course with Applied Arts, Sculpture, Graphics, Textile Design and Painting with specialized area from recognized University or equivalent examinations thereto with **55% aggregate and not of more than 27 years of age by June 30, 2018** shall be eligible to apply for admission to the First Semester of M.F.A. Degree. Candidate who have to their credit BFA in Painting, with Graphic or Textile of Allahabad University will be considered eligible for admission in Graphic/Textile Design stream.

1.2.19 For admission to M.A. (Development Studies), a candidate is required to have minimum 50% marks or equivalent grade in High School and Higher Secondary/Intermediate and 55% Marks or equivalent grade in Bachelor or Social



Work/B.Com./B.A. in Economics/B.Sc. (Ag.)/Bachelor in Development Studies/Globalization and Development Studies/Bachelor in Business Administration/Management/Bachelor degree in Rural Development/Bachelor of Planning from a recognized University and minimum 50% score in PGAT-2018.

- 1.2.20 For admission to M.Tech. (Earth System Sciences), a candidate is required to have
- Master's degree in Physical Sciences/Mathematical Sciences/ Chemical Sciences/ Life Sciences/ Geosciences/ any cognate discipline or a B. Tech./B.E. with marks/CPI not below the 55% marks/ 5.5 (on a 10 point scale) (50% for SC/ST candidates) for appearing in the entrance exam.
 - Candidates working in a research and development organization on permanent basis in the field of Earth System/Cognate disciplines may be sponsored by his/her employer for direct admission to the M. Tech. programme.
- 1.2.21 For admission to M.Sc. (Environmental Science), a candidate is required to have passed/ appeared in Bachelor's degree (10+2+3) examination with science subject from a recognized University, and has secured not less than 50% marks on the aggregate. Provided that requirement of a minimum of 50% marks is not applicable in case of SC/ST candidates.
- 1.2.22 For admission to M.Sc. (Textile and Apparel Designing), a candidate is required to have passed B.Sc./ B.A./ B.Sc. (Home Science)
- 1.2.23 For admission to M. P. Ed. (Physical Education), a candidate is required to have
- A Bachelor of Physical Education (B.P.Ed.) or equivalent Or Bachelor of Science (B.Sc.) in Health and Physical Education with at least 50% marks for General and 45% marks for SC/ST/ OBC candidates and those sports persons who have represented India in International Championship OR who have won positions during last three academic sessions in the National/ Intervarsity Championships, being listed in Association of Indian Universities (AIU) and Indian Olympic Association (IOA).
 - The candidate should submit an original medical/fitness certificate through registered Government Medical Officer at the time of admission. An eligible candidate if she is married women shall be eligible to appear in Admission Test for admission to M.P.Ed course. In case, a Women candidate gets pregnant and reaches the stage of expectance during the course, she will have to discontinue her studies for at least one academic year. She can join back a fresh from the beginning of the semester keeping the guidelines pertaining to the maximum duration of the course in mind.



- 1.2.24 For admission to M.A. in Film Theater, a candidate is required to have a degree of graduation in any subject.
- 1.2.25 For admission to M.Sc. degree in Design and Innovation in Rural Technology following candidates are eligibility:
- The admission to the course of M.Sc. degree in Design and Innovation in Rural Technology is open to any candidate who has earned Bachelor degree under 10+2+3 pattern of education with Botany/Zoology/Agriculture discipline of any Indian University or any accredited institution or any foreign University which the academic council of the University of Allahabad may recognize from time to time for this purpose.
 - The candidates shall be admitted through the entrance test conducted by the University followed by Group discussion and Personal Interview at the Centre in the ratio of 60:40 (60% marks entrance test conducted by University, 30% group discussion and 10% for Personal interview).
- 1.3 **Appearance in the Admission Test** : Every candidate (other than candidates exempted from the admission test under paragraph 1.5) who fulfils the eligibility criteria, under paragraph 1.2 and its sub-paragraphs, is required to appear in the M.A./M.Com./ M.Sc. Admission Test, in accordance with the provisions given in the following sub paragraph (1.3.1 to 1.3.6).
- 1.3.1 Candidates who have passed the B.A. Examination, including candidates governed by paragraph 1.6, and are desirous of admission to M.A. in subjects other than Anthropology, including subjects for which they would be Non-subject candidates under sub-paragraphs, are eligible to appear in the M.A. Admission Test in the two subjects with which they have passed B.A. Part III Examination.
- 1.3.2 Candidates who have passed the B.Com/ B.Com. (Honours) Examination, including candidates governed by paragraph 1.6, who are desirous of admission to M.Com., or as Non-subject candidates to the relevant M.A. subjects, are eligible to appear in the M.Com. Admission Test.
- 1.3.3 Candidates who have passed the B.Sc. Examination, including candidates governed by paragraph 1.6, and are desirous of admission to M.Sc. in subjects other than Bio-Chemistry, Agricultural Sciences, Anthropology, Applied Geology and Computer Science or to M.Com. or as Non-subject candidates to the relevant M.A. subjects, are eligible to appear in the M.Sc. Admission Test in the two subjects with which they have passed B.Sc. Part III Examination.



- 1.3.4 Candidates who have passed the B.A. (Honours) Examination and are desirous of admission to M.A. in their main Honours subject (not being Anthropology), or as Non-subject candidates to relevant M.A. subjects, or having passed the B.A. (Honours) Examination with Mathematics as the main subject are desirous of also being considered for admission to M.A. in statistics (under sub-paragraph 1.2.8) are eligible to appear in the M.A. Admission Test only in their main Honours subject.
- 1.3.5 Candidates who have passed the B.Sc. (Honours) Examination and are desirous of admission to M.Sc. in their main Honours subject (not being Anthropology or Bio-Chemistry), or to M.Com. or a Non-subject candidates to relevant M.A. subject, or having passed the B.Sc. (Honours) Examination with Mathematics as the main subject are desirous of also being considered for admission to M.Sc. in Mathematics (under sub-paragraph 1.2.8), are eligible to appear in the M.Sc. Admission Test only in their main Honours subject.
- 1.3.6 In case the M.A./M.Sc. Admission Test is being organized in only a single subject out of the two subjects in which the candidate could appear under sub-paragraphs 1.3.1, 1.3.3, 1.3.4 or 1.3.5, the candidate shall appear in the Admission Test in such single subject only.
- 1.3.7 Candidates desirous of admission in M.Sc. in Bio-Chemistry, M.Sc. in Agricultural Sciences, M.A./M.Sc. in Anthropology, M.A. in Mass Communication, M.Sc. in Computer Science, M.Mus, M.F.A., M.A. (Theatre & Film), M.D.S., M.Sc. in Material Science, M.Tech. (ESS), M.Sc. (Bioinformatics), M.Sc. (Environmental Science), M.Sc. (Textile & Apparel Designing), M.Sc. (Applied Geology), M.P.Ed., M.Sc. in Design and innovation in Rural Technology, M.A. in Women Studies and M.C.A. are required to appear in the separate Admission Test for these courses/subjects, and their admissions are not allowed on the basis of the general M.A/M.Sc. Admission Test.
- 1.3.8 **Candidates enrolled in M.A./M.Com./M.Sc./D. Phil./ Ph.D. in the University of Allahabad or elsewhere or already holding the M.A./M.Com./M.Sc./D.Phil. /Ph.D. degree in any subject, are not eligible to appear in any Admission Test. However in special cases, where a prospective candidate claims a genuine interest in pursuing studies in a New Post-graduate programme and present credible evidence in affirmation of such genuine interest, a Committee constituted by the Vice-Chancellor of the University will consider such representation.**
- 1.3.9 Notwithstanding the provisions of paragraph 1.3.8, candidates enrolled in M.A./M.Sc. in a particular subject in the University of Allahabad or elsewhere or already holding the M.A./M.Sc., degree in the particular subject are not permitted to



appear in the M.A./M.Sc. Admission Test in the same subject and similarly candidates already enrolled in M.Com. in the University of Allahabad or elsewhere, or already holding the M.Com. Degree, are not permitted to appear in the M.Com. Admission Test in any circumstance. In case such candidates appear in the concerned Admission Test despite this prohibition, their candidature for the same (and the admission granted on that basis) shall stand cancelled at any stage.

- 1.4 **Non-subject Candidates** : The admission of Non-subject candidates to M.A. in certain subjects, as well as to M.Sc. in Psychology is governed by the provisions of the following sub paragraphs. 4.1 to 1.4.5.
- 1.4.1 For admission to M.A. in Ancient History, Education, English, Hindi, Medieval & Modern History, Philosophy and Political Science and to M.A./M.Sc. in Defence Studies, candidates who have passed the B.A./B.Sc. Part III Examination without these subjects, or the B.Com./ B.Com. (Honours) Examination, shall be eligible to be considered for admission as non-subject candidates up to the limit of 10% of the approved seats in each of these subjects, but in the case of Economics, the non-subject candidates must have studied Economics or Mathematics or Statistics as one of the subject up to at least the B.A./B.Sc. Part II level.
- 1.4.1 (a) For Admission in M.A./M.Sc. in Psychology, the candidates who have passed B.Sc. with 60% or above marks as well as candidates from Social Science discipline having Education / Philosophy / Geography / Political Science / Sociology / Social Anthropology / Economics as one of the subject in B.A.-III Examination have passed with 60% or above marks shall be considered as non-subject candidates.
- 1.4.1 (b) The candidate who have appeared in PGAT-2018 in Bio-chemistry/Botany/ Zoology/Chemistry/Computer Science will be considered as non-subject candidate for admission in M.Sc. (Bioinformatics), they (non-subject candidates) shall be considered after the subject candidates if seats remain unfulfilled.
- 1.4.1 (c) The candidate who have appeared in PGAT-2018 in Physics/Chemistry will be considered as non-subject candidates for admission in M.Sc. (Material Science), they (non-subject candidates) shall be considered after the subject candidates if seats remain unfulfilled.
- 1.4.1 (d) The merit for Non-subject candidate will not be, in any case less than the last candidate of the subject in their respective category.



- 1.4.2 For admission in non-subjects candidate has to appear in both subjects studied in B.A./B.Sc. III year or in Commerce only (B.Com. candidates) or in only Honors subjects. (Honors candidates). Non-subject candidates who qualify in the Admission Test, under sub-paragraph 1.4.1, may be required to undergo further assessment by the respective Department to determine their suitability for admission to the concerned subject. In the case of admission to Psychology, before such further assessment is carried out, the Head of the Department may arrange the non-subject candidates who qualify in the Admission Test in an over-riding order of priority on the basis of the Qualifying Graduate Examination passed or the subjects of the candidates at the same. Candidates desirous of being considered as Non-subject candidates are strongly advised to ascertain from the concerned Departments the provisions governing the admission of non-subject candidates before submitting their form.
- 1.4.3 Candidates (other than those exempted from the Admission Test under paragraph 1.5), who fulfill the eligibility criteria under paragraph 1.2 and its sub-paragraphs for being a non-subject candidates shall have to appear in M.A./M.Sc. Admission Test in the two subjects in which they have passed the B.A./B.Sc. Part III Examination. The standardized score of such candidate (under paragraph 2.2. of Section II) for purposes of admission as a non-subject candidate in relevant subjects or in M.Com., shall be determined by calculating the average of their Admission Test score in two subjects in which they have appeared. (For normalization suitable scaling formula may be applied as decided by core committee of PGAT-2018).
- 1.4.4 In case the M.A./M.Sc. Admission Test is being organized in only a single subject out of the two subjects in which the candidate could appear under sub-paragraph 1.3.1 or 1.3.2 the Standardized Score of such candidate (under paragraph 2.2. SECTION II) for purpose of admission as non-subject candidate in relevant subjects or in M.Com., shall be determined only on the basis of the Admission Test Score in such single subject. (For normalization suitable scaling formula may be applied as decided by core committee of PGAT-2018).
- 1.4.5 In case the M.A./M.Sc. Admission Test is being organized in both the subjects in which the candidate could appear under sub paragraph 1.3.1 or 1.3.2 but he candidate appears in only one of the two subjects the Standardized Score of such candidate for purpose of admission as a non subject candidate shall be determined by treating the Admission Test score in the subject in which the candidate has not appeared to be zero(0).



- 1.5 Exemption from the Admission Test and Special Consideration:** The provision relating to the categories of candidates who are eligible for exemption from the Admission Test, and the conditions governing such exemption, and the categories of candidates who, having appeared in the Admission Test are entitled to Special Considerations, are specified in the following subparagraphs 1.5.1 to 1.5.5
- 1.5.1 Foreign nationals shall not be required to appear in the Admission Test, and their cases for admission shall be governed by the provisions of paragraph 2.2. of SECTION II.
- 1.5.2 Non-Resident Indians (NRI), i.e. An Indian national domiciled abroad, or NRI wards, who have graduated from a foreign Univ., shall not be required to appear in the Admission Test, and their cases for admission shall be governed by the provision of paragraph 2.3 and 2.6.1 of SECT. II.
- 1.5.3 Candidate for admission to M.Sc. in Bio-Chemistry who have passed the M.B.B.S. Examination and desirous of seeking admission to M.Sc. in Bio-chemistry shall not be required to appear in the Admission Test, and their cases for admission shall be governed by the provisions of paragraph 2.3 of SECTION II.
- 1.5.4 Serving Officers of the Armed Forces, having the qualifications prescribed in the Ordinances and Regulations, shall be eligible for admission to supernumerary seats in M.Sc. in Defence Studies under rules prescribed in this regard.
- 1.5.5 The provisions, on Special Considerations for certain categories, of candidates who are required to appear in the Admission Test, are specified in SECTION II.
- 1.5.6 For admission to M.F.A. (Master in Fine Arts), M.A. in Theatre & Film, Master in Development Studies, M.Sc. in Material Science, M.Sc. in Computer Science, M.Tech. in Earth System Sciences, M.Sc. in Bioinformatics, M.Sc. Environmental Science, M.Sc. in Textile and Apparel Designing, M.P.Ed. subjects separate eligibility criteria given, please see the brochure.
- 1.6 Provisional Admission to certain categories of graduates of the University of Allahabad: An examinee who has appeared for the B.A./ B.Sc./ B.Com. (Part III) Examination of the University of Allahabad for the year 2018 and has not been successful in the said examination but is eligible to appear, and is appearing in the Second Examination (Back Paper) of 2018 for the same, shall be eligible to appear in the concerned Admission Test and also to be considered for admission, provided he is not ineligible on any other ground. Such candidate must submit the Form and appear for the Admission Test along with successful examinees. Upon securing an



appropriate place in the order of merit of successful candidates such candidate may be granted provisional admission, but such provisional admission shall automatically stand cancelled in case such candidate is not successful in the Second Examination. This facility is not admissible to candidates who have graduated from other Universities.

- 1.6.1 An examinee who has appeared for the B.A./B.Sc./ B.Com. (Part III) Examination of the University of Allahabad or any other University for the year 2018 and his result is not declared shall be eligible to appear in the concerned Admission test. Such candidates if successful must submit their result/ marksheet at the time of admission in the respective departments, otherwise they will not be considered for admission in Post Graduate course applied for.
- 1.7 **Reservation** : In accordance with provision of Section 9 of the University of Allahabad Act, 2005 (Act No. 26 of 2005) seats shall be reserved for Scheduled Caste (SC), Scheduled Tribe (ST) and Other Backward Classes (OBC) category candidates in all subject / course for which the Admission Test has been held, in accordance with following given as under:
 - 1.7.1 15 % of the total seats in each subject / course shall be reserved for candidates belonging to Scheduled Caste (SC) category;
 - 1.7.2 7.5 % of the total seats in each subject / course shall be reserved for candidates belonging to Scheduled Tribe (ST) category;
 - 1.7.3 27 % of the total seats in each subject / course shall be reserved for candidates belonging to Other Backward Caste (OBC) category.
 - 1.7.4 In case the seats reserved for candidates belonging to ST category remain vacant on account of the non-availability of candidates, such vacant seats shall be adjusted with the seats reserved for candidates belonging to SC category.
 - 1.7.5 Only such candidates shall be eligible for admission on the reserved seats who have mentioned their category in the On-line Form.
 - 1.7.6 **Physically Challenged Quota** : A candidate who has a certified disability of not less than 40 % in any limb or in orthopedic structure which, in the opinion of the Medical Board (constituted by the University of Allahabad), amounts to an overall physical handicap of not more than 70 % or is a certified blind, may be admitted to the concerned course / subject, irrespective of his position in the order of merit of the total aggregate score, on the recommendation of the Medical Board, subject to the condition that number of such candidates shall not exceed 5 % of the total seats in



the respective course / subject. The privilege shall not be given except claimed by the candidate at the time of application. At the time of admission the candidate shall be required to produce a certificate issued by the Chief Medical Officer of the appropriate District or by the 'Viklang Kendra', Allahabad, which testifies to his disability and bears an attested photograph indicating his / her disability clearly.

- (a) All candidates entitled to be admitted under the above quota to a course shall be adjusted against their respective social category.
- (b) Seats under Physically Handicapped quota shall be filled in order of preference given below;
 - i. Visually impaired
 - ii. Hearing impaired
 - iii. Orthopedic disability
- (c) Seats of each category given in (b) (i), (ii) & (iii) shall be filled on the basis of order of merit of the candidates in the Admission Test."

1.7.7 Kashmiri Migrants: Weightage as per Central Government norms shall be given to Kashmiri Migrants. In order to avail this weightage, the candidates shall have to present a certificate to this effect from an officer of the Ministry of Human Resource Development not below the rank of Joint Secretary or equivalent.

1.7.8 Foreign Nationals / NRI: Foreign Nationals shall be required to apply through International Student's Advisor in accordance with the procedure laid down by the University of Allahabad. The candidate in this case shall not be required to appear in the Admission Test / Entrance Test, but shall be considered for admission on the recommendation of a committee constituted for the purpose, which shall examine the academic credentials and certificates of the candidate before making any recommendation.

1.7.9 Sports Quota :

- 1.7.9 (a) For admission to post-graduate classes under sports-quota, only those candidates will be considered for admissions, who have represented in Inter University Games or Open National or National games or International Games by the respective Federations of the Sports events provided there are eligible to participate in such events under All India University Associations (AIU) Rules.



- 1.7.9 (b) The Advisory Committee, Athletic Association, University of Allahabad reserves the right to conduct the field trials and verification of documents of any candidate to determine genuineness of the documents.
- 1.7.9 (c) The candidate shall be required to produce all the original game / sports certificate in support of his her claim at the time of admission / interview. The University reserves the right to verify the documents (games / sports certificates etc.) and if found fake, suitable action shall be taken against the candidate.
- 1.7.9 (d) 2 % of the total seats in each subject / course shall be allotted under Sports Quota
- 1.8 Entries made by the candidate in the Form shall be considered final, and no subsequent request for change(s) or modification(s) in the same shall be entertained.
- 1.9 **Teacher/Employee Ward's Quota:** After the completion of admission on the sanctioned seats in each course of study, the sons and daughter of regularly appointed and retired teachers / employee of the University, the University Institutes, the constituent Colleges and constituent Institutes, on submission of relevant certificate duly signed by the Registrar in case of University and University Institutes, the Principal in the case of constituent Colleges and the Director in case of constituent Institutes shall be admitted, on the basis of their relative scores against 5 % supernumerary seats (with a minimum of one seat) in each course of study, only in the unit / sub-unit in which such Teachers / Employees are serving or where from they have superannuated. Provided further if in case seats remain vacant in unit/subunit, these will be filled by the wards of Employee of other units/subunits.

SECTION-II

ADMISSION RULES AND PROCEDURE

- 2.1 Admissions to the courses of study referred to in SECTION I are governed by the relevant provisions of the University of Allahabad Act 2005 and the first ordinance made under section 29(2) of University of Allahabad Act 2005.
- 2.2 In the case of such candidates as may be exempted from the Admission Test, the Standardized Score, for any subject shall be calculated, for the denominator of 300, on the basis of the marks obtained in such subject in all the Parts of the Three-year Degree Course examination taken together.



- 2.3.1.1 The marks obtained by the candidate in the Admission Test for M.A./M.Sc. in any subject (on the denominator of 300) shall be his Standardized Score for such subject in general. However, for admission in M.A./M.Sc. in Statistics, the marks obtained in the Admission Test for Mathematics shall be the Standardized Score for a candidate who has passed the Graduate examination with Mathematics but without Statistics.
- 2.3.1.2 The marks obtained in both the subjects in the M.A./ M.Sc. Admission Test shall be converted to the Standardized Score by summing up the marks obtained in test in the two subjects and calculating standardized score on the denominator of 300. Such standardized score will be used for calculation of merit for admission to M.Sc. Computer Science, M.Sc. Applied Geology (Earth & Planetary Science Deptt.) as well as in the case of the Non-subject category and for admission to Hostels. When two candidates secure the same Standardized Score, inter-se merit shall be decided on the basis of the total marks obtained by the candidate at the Graduate examination after excluding the marks obtained in the Practical Examination. If there is a tie once again, the same shall be decided by draw of lots.
- 2.3.1.3 The total of the marks obtained in both the subjects in the M.A./ M.Sc. Admission Test as calculated for a denominator of 300, shall be the Standardized Score of the candidate for the M.A. subject, as well as for M.A./M.Sc. in Defence Studies, for which he/ she is a Non-subject candidate and for M.Com. In case, in the circumstances referred to 1.4 of SECTION I, the candidate has appeared in the Admission Test in a single subject, as marks obtained by him in such single subject, as calculated for a denominator of 300. In case the candidate is required to appear in two subjects in the M.A./M.Sc. Admission Test but has appeared in only one subject, for the calculation of his Standardized Score under this Rule, it shall be deemed that his score in the second subject, in which he did not appear, is zero (0).
- 2.3.1.4 The marks obtained by the candidate in the M.Com. Admission Test, calculated for a denominator of 300. shall be his Standardized Score for M.Com. and for those subjects of M.A. for which he is a Non-subject candidate.
- 2.4.1 The Computed Marks of all candidates (who have appeared in the Admission Test), for each subject of M.A./M.Sc, and for M.Com.. shall be determined in accordance with the procedure laid down in paragraph 2.5 of this section. Admission shall be made in each subject and in M.Com up to the limit of seats available in the same, in the consolidated order of merit of Computed Marks, but admission shall be granted to candidates of Special Categories (such as. Non-subject candidates. Arts and Science graduates for admission in M.A./ M.Sc. Anthropology, Outstanding Sports



persons, Physically Challenged, etc.) only up to the maximum limit (ceiling) of seats assigned to each such category, Separate orders of merit shall be drawn for unreserved (General) seats and for reserved seats for the Scheduled Castes, Scheduled Tribes and other categories for which reservation is applicable. The candidates eligible for admission under the Special Consideration specified in paragraph 2.6 of this section shall be granted admission irrespective of their place in the order of merit list but without exceeding the prescribed ceilings in that regard.

- 2.4.2 The Computed marks of the candidate who. after passing the qualifying graduate examination of the University of Allahabad and qualifying in - (i) the Admission Test for M.A./M.Sc in Anthropology. M.Sc. in Bio-Chemistry or M.Com or (ii) the Admission Test in any other subject of MA./M.Sc. features lowest in the merit order of admitted candidates in the concerned course/subject, shall be the Cut-off Marks for admission to the said course/ subject, and any candidate of any other category, as well as any candidate who is eligible for consideration for provisional admission under paragraph 1.6 of SECTION I with lesser Computed Marks than such Cut-off Marks shall not be eligible for admission to such course subject However, this restriction shall not be applicable to candidates governed by the Special Consideration under paragraph 2.6 of this Section.
- 2.5 For the calculation of the Computed Marks of a candidate, a discount will be applied or a weightage will be added to his Standardized Score in accordance with the following provisions:
- 2.5.1 For admission to any subject of M.A./M.Sc. or to M.Com., preference shall be given to fresh graduates (i.e. candidates who have passed the qualifying graduate examination for the academic year 2016-17) over graduates of preceding academic years. Accumulative penalty at the rate of 5% of the Standardized Score shall be applied for every gap year in case of non-fresh graduates, subject to the maximum discount of 15%.
- 2.5.2 A weightage of 5% of the Standardized Score shall be added to the Standardized Score of a candidate who holds the 'C' certificate of the National Cadet Corps (NCC).
- 2.5.3 Weightage as per Central Government norms shall be given to Kashmiri Migrants. In order to avail of this weightage, the candidate shall have to present a certificate to this effect from an Officer of the Ministry of Human Resource Development not below the rank of Joint Secretary or equivalent.



2.6 The following special consideration as provided in 2.6.1, 2.6.2 and 2.6.3, shall be applicable to candidates for admission to any subject of M.A./ M.Sc. or to M.Com. and who are Foreign nationals.

2.6.1 Foreign nationals who have applied through the International Students' Advisor in accordance with the procedure laid down by the Post Graduate Admission Board in this regard, shall not be required to appear in the Admission Test for any subject of M.A./M.Sc. or for M.Com., but shall be considered for admission on the recommendation of a Committee constituted for the purpose, which shall examine their academic credentials and certificates before making any recommendation.

2.6.2 For admission to post-graduate classes under sports-quota, only those candidates will be considered for admissions, who have represented their University at the Inter-University Championship and are currently eligible for participation in Inter-University Championship as per eligibility rules of the Association of Indian Universities (AIU), New Delhi.

The Advisory Committee, Athletic Association, University of Allahabad reserves the right to conduct the field trials and verification of documents of any candidate to determine genuineness of the documents.

The candidate shall be required to produce all the original game / sports certificates in support of his her claim at the time of admission / interview. The University reserves the right to verify the documents (games / sports certificates etc.) and if found fake, suitable action shall be taken against the candidate. 2 % of the total seats in each subject / course shall be allotted under Sports Quota.

2.6.3 A candidate who has a certified disability of not less than 40 % in any limb or in orthopaedic structure which, in the opinion of the Medical Board (constituted by the University of Allahabad), amounts to an overall physical handicap of not more than 70 % or is a certified blind, may be admitted to the concerned course / subject, irrespective of his position in the order of merit of the total aggregate score, on the recommendation of the Medical Board, subject to the condition that number of such candidates shall not exceed 3 % of the total seats in the respective course / subject. The privilege shall not be given except claimed by the candidate at the time of application. At the time of admission the candidate shall be required to produce a certificate issued by the Chief Medical Officer of the appropriate District or by the 'Viklang Kendra', Allahabad, which testifies to his disability and bears an attested photograph indicating his / her disability clearly.



Assessment Committee : The Assessment Committee shall consist of the Director of Admissions- 2017 (or his representative), the Dean of Students' Welfare (or his representative) and three Medical Doctors [At least two of the medical doctors should be present at any meeting].

- 2.6.4 A candidate who has been granted admission under any of the Special Considerations shall be adjusted, according to his social category, on the unreserved seats, or on the seats reserved for his social category, in the concerned subject in M.A./ M.Sc. or in M.Com.
- 2.7 All candidates for admission to M.A. and M.Sc. in Defence Studies/ Mathematics/ Statistics shall be arranged in combined order of merit and admitted on that basis. In all the said subjects only those candidates shall be admitted to M.Sc. who have passed the qualifying graduate examination with science subjects.
- 2.8.1 The acceptance of the Application Form of the candidate shall be provisional and shall not give him any guarantee or right of admission.
- 2.8.2 The place of a candidate in the order of merit for any subject in M.A./M.Sc. or for M.Com. shall be modified in case of an error in the calculation of his Computed Marks, and the admission of a candidate who is excluded from the said order of merit as a result of the rectification of his Computed Marks shall be cancelled.
- 2.8.3 The instructions regarding the enrollment of admitted candidates in the courses of subjects concerned, and other procedures to be under-taken by such candidates, as well as the penalties (including cancellation of admission) for failure to comply with the said instructions, shall be issued by the Post-Graduate Admission Board and shall be binding on the admitted candidates.
- 2.9 If a candidate uses or attempts to use unfair means or indulges in any other kind of improper activity, during the Admission Test, or during the processes precedent or subsequent to the Admission Test engages in any intimidatory, violent or other activity which disturbs or disrupts any of such processes or keeps a mobile phone during examination he shall be charged and punished for resorting to unfair means/unfair practices. In such cases the procedure and penalty (which may extend from cancellation of his candidature/admission to debarment from admission to the University and the institutions associated with it for one or more years or forever) shall be determined by the Post Graduate Admission Test Board.
- 2.10 The University reserves the right to refuse admission to any candidate without specifying any reason and to make changes in the rules and procedures for admission.



- 2.11 The admission and enrollment of a candidate to any course of study in violation of these Rules, or of the Ordinances/ Regulations/ other provisions of the University shall stand cancelled with retrospective effect if such violation comes to light at any stage.
- 2.12 If a candidate has given false information in the Application Form or has concealed any relevant fact or presented a misleading version of such relevant fact, or enclosed any false or fraudulent document, his claim to be considered for admission shall stand cancelled and he shall be governed by the provisions of paragraph 2.10 of this section.
- 2.13 The following provisions shall be binding on all students of the University.
- 2.13.1 No student of the University (including any University Institute) is permitted to be admitted/ enrolled simultaneously in more than one degree-granting course of study (including research) in the University or to be admitted/ enrolled in any degree granting course of study in any other Institution (including a University or Constituent College or Constituent Institute of the University) during the pendency of his admission/enrollment in a degree granting course in the University.
- 2.13.2 The admission/enrollment of a student referred to in paragraph 2.13.1 in the course of study concerned in the University shall automatically stand cancelled with effect from the date of his admission/enrollment in any degree-granting course of study in any other Institution, (including a University or Constituent College or Constituent Institute of the University).
- 2.13.3 In case a student referred to in paragraph 2.13.1 secures admission/enrollment in a new degree granting course of study in the University (including a University Institute) during the pendency of his admission/enrollment in another earlier admission/enrollment shall automatically stand cancelled with effect from the date of his later admission/ enrollment.
- 2.13.4 A student whose admission/ enrollment in a Post-graduate degree granting course of study (including Law) automatically stands cancelled under paragraph 2.13.3, but who at the time of such cancellation had earned eligibility to appear at any part of the examination of the said course of study as an ex-student may, upon passing the Final Examination of the new course of study referred to in paragraph 2.13.3, or upon the termination of his admission/enrollment there in apply to the Examinations Committee for permission to appear in the said part of the Examination as an ex-student. However The Examination Committee shall not grant such permission except on the following conditions:



- 2.13.4.1 The record establishes that at the time of the said cancellation, he had earned the said eligibility.
- 2.13.4.2 Not more than four consecutive academic sessions have elapsed since the academic session in which he was admitted/ enrolled in the said part as a regular student.
- 2.13.5 No student of the University (including a University Institute) shall appear as a regular and / or an ex-student in the same academic session in any part of the examination of more than one degree-granting course of study.
- 2.13.6 A person who has been on the rolls of the University (including the University and Constituent Colleges and Constituent Institutes of the University) for a period of eight academic sessions or more (excluding the actual but not more than the permissible maximum period of enrollment as a research scholar) shall not be eligible for admission to any course of study.
- 2.13.7 No student of the University (excluding the Institute of Correspondence Courses and Continuing Education), other than one sponsored or permitted by his employer to attend (and fulfill the attendance requirements of) the course of study concerned, is permitted to engage whole-time employment or whole-time self-employment.

NOTE : Before submitting the Form, the candidate should ensure that his candidature is consistent with the Rules specified in paragraph 2.13.1-2.13.7, above.

SECTION-III

MODE OF THE ENTRANCE TEST

- 3.1 The entrance test for admission to M.A/ M.Sc./ M.Com./M.Tech. course for the session 2018-19, as specified in the first section of the Brochure, will be conducted simultaneously at thirteen centres across the country viz. Allahabad, Bareilly, Delhi, Lucknow, Gorakhpur, Varanasi, Patna, Bhopal, Bangaluru, Kolkata, Srinagar, Agra and Kanpur. (If the number of candidates appearing at a particular centre is Twenty five (25) or less than 25 then their examination centre be given to the Allahabad centre or other nearest centre.
- 3.2 The candidates seeking admission to M.A. and M.Sc. Courses, shall have to appear in the test in both the subjects which they have studied in B.A./ B.Sc. IIIrd year. But the candidates who have passed B.A/ B.Sc. (Honours) shall appear in the test in only subject of Honours, as specified in section I of the Brochure.



- 3.2.1 Candidate seeking admission in M.Sc. Computer Science course, shall have to appear separately in test for Computer Science. Question Paper will have two sections. Section-I : Mathematics (compulsory) and section-II : Physics or Computer Science.
- 3.2.2 Candidate seeking admission in M.Sc. Applied Geology shall have to appear in test in any two of the following subject. (i) Physics (ii) Mathematics (iii) Geology.
- 3.3 The time duration of the PGAT-2018 will be of two hours for M.A. and M.Sc. courses as well as for M.Com, M.A/ M.Sc. Anthropology. M.Sc. Bio-Chemistry. M.Sc. Agricultural Sciences. M.Sc. Computer Science, M.Mus. and M.A. Mass Communication. Additional 15 minutes shall be given for the distribution of booklets and filling up the entries on the cover page of the answer booklet of each subject.
- 3.4 There shall be combined questions-booklets each for M.A. and M.Sc. courses. There shall be separate question papers for M.Com. M.A./ M.Sc. Anthropology. M.Sc. Bio-Chemistry. M.Sc. Agricultural Sciences, M.Sc. Computer Science and M.A Mass Communication. The question booklets shall consist of separate question papers of 300 marks for each subject covered under the above mentioned courses i.e. M.A. and M.Sc. The question papers of M.Com.. M.A./ M.Sc. Anthropology. M.Sc Bio-Chemistry, M.Sc. Agricultural Sciences, M.Sc. Computer Science and M.A. Mass Communication shall also be of 300 marks each. The pattern of questions papers will be uniform for all the subjects.
- 3.4.1 M.F.A. (Master in Fine Arts), M.Sc. in Cognitive Science, M.A. in Theatre & Film, Master in Development Studies, M.Sc. in Material Science, M.Tech. in Earth System Sciences, M.Sc. in Bioinformatics, M.Sc. Environmental Science, M.Sc. in Textile and Apparel Designing and M.P.Ed. (Physical Education) please see brochure/syllabus.
- 3.5 The candidate appearing in the test for admission to M.A. and M.Sc. courses, will be provided with two answer booklets-one for each subject which he/she has studied in B.A./ B.Sc. Illrd year.The candidate appearing in one subject for admission to M.A./M.Sc. courses (only for honours students) M.Com./M.A./ M.Sc. Anthropology, M.Sc. Bio-chemistry, M.Sc. Agriculture Sciences, M.Sc. Computer Science and M.A. Mass Communication will be provided with one answer booklet. Appropriate space will be marked for each answer in the answer booklet. The invigilator will collect the first answer booklet at the expiry of 1.30 hours, and the second answer booklet at the completion of the test. The candidates shall be required to solve the question papers in a single sitting and shall not be allowed to leave the hall before the completion of the test. The detailed programme of the PGAT-2018 is given on the page no. 2.



- 3.6 For admission in M.A. Music (Vocal and Instrumental- Sitar/ Tabla) and M. Mus. besides the theory paper of 300 marks a Practical Test will also be conducted by the concerned department. The marks allotted for practical test will be 100 marks. The results shall be prepared and announced on the basis of marks obtained both in the written test and the practical exams. For admission in M.A. Painting also, Practical Test of 100 marks will be conducted by the department of Visual Arts. The results shall be prepared and announced on the basis of marks obtained both in the written test and the practical exams.
- 3.7 The question paper of every subject in M.A./M.Sc./M.Com. etc. entrance test will generally cover the syllabus of B.A./ B.Sc./ B.Com. Course of the University of Allahabad. The syllabus of PGAT-2018 is given in this booklet.
- 3.8 Multiple choice types of questions will be asked in all the test papers of the Admission Test:
- 3.9 The candidates are advised to follow the instructions printed on the cover page of the answer booklet carefully.
- 3.10 Talking with other candidates in the examination hall, use or attempt to use unfair means, involvement in improper activities, interference in the proper conduct of the examination by the candidate himself or with the help of other persons or flouting the official instruction are totally prohibited. The candidates shall be punished for unfair means/ improper conduct if he transgresses any one of the prohibition.
- 3.11 The candidate must hand over his answer-booklet to the invigilator in the examination hall after the completion of the examination. If the candidate fails to hand over his answer booklet to the invigilator, or detaches one or more sheets from the answer-booklet or smuggles out the whole or the part of the answer booklet or hands over any other answer-booklet in place of the booklet which has been issued to him will be charged with unfair means and his examination will be cancelled.
- 3.12 The candidate should keep in mind that the Admission Test is to a measure of his knowledge in the subject as well as the speed of answering the questions. The candidate has to compete with other candidates for getting a place in the merit list in every subject of M.A./ M.Sc. and M.Com. Therefore it is expected of him that he would carefully read the instructions given in the booklet and should give an appropriate answer having understood the questions correctly. The word limit has to be adhered strictly.
- 3.13 The candidate has to bring his admit card compulsorily that has been issued to him in order to appear in the admission test. If a candidate fails to bring the admit card he/she shall not be allowed to sit in the Admission Test.



- 3.14 Candidates are strictly prohibited to bring to the Admission Test premises and examination hall any improper/ unauthorized material, books, parts of books, hand written/ typed/printed pages, sketches, Photostat copies, bags and other materials that could render unfair help in answering questions. The use of calculators is strictly prohibited in the Admission Test.
- 3.15 The candidate has to use a single colour ink/ ball pen refill in answering his questions. Therefore, the candidates should bring them in proper quantity while coming in to the examination hall.
- 3.16 Scrutiny or re-valuation of the answer-booklets of the Admission Test will not be permitted in any condition.
- 3.17 Use or possession of Mobile/Cellular Phones/Electronic gadgets is strictly prohibited. If any candidate is found in possession these during the examination in the campus his examination would automatically be cancelled. He/she may be barred from all other University examinations as well.

SECTION-IV

INFORMATION AND INSTRUCTIONS RELATING TO THE ADMISSION TEST

Admit Card: Admit Cards for all the valid applications received by the university will be processed and enabled on the website auadmissions.com The Candidates can download their admit card from the website after entering their Application ID and password. Candidates must correctly enter their password in the Online Application Form. All Admit Cards will be uploaded for all the valid applications one week before actual commencement of the PGAT-2018 Test.

IMPORTANT: No Admit Card will be sent by post or distributed from the counters. The Admit Cards downloaded from the website auadmissions.com are valid and does not require any attestation.

Note: The information provided and the data supplied by the applicant through Registration Application/Form shall be preserved in the University for a period of only six months from the date of the declaration of the result of Entrance/Admission Test. The records will be disposed off after the said period and no enquiry shall be entertained in this regard by the University after the expiry of the said period. The University shall use this data for various purposes; hence, in no case shall any change be allowed at a later stage. Therefore, all the information must be furnished correctly, completely and clearly by the applicant himself/herself as per the instructions given in the brochure/website auadmissions.com The Evaluated OMR Answer



Sheets/Answer Booklets will be preserved only for a period of six months after the declaration of results of Entrance/Admission Test. The records will be disposed off after the said period and no enquiry shall be entertained in this regard by the University after the expiry of the said period.

- 4.1 **ONLINE APPLICATIONS:** Candidates can submit online form for the PGAT-2018 test at the website ***auadmissions.com*** The website provides all the information required for online form submission.
- 4.2 **Online Prospectus:** The prospectus for PGAT-2018 can be downloaded from the website auadmissions.com and the admission seeking candidates can visit the website and download it. Candidates are advised to read the prospectus carefully before applying.
- 4.3 **Process of filling up the Online Registration Form:** Candidates willing to submit the online form are first required to open the website ***auadmissions.com*** and submit their online form, by entering all columns correctly.
- 4.4 **PROCEDURE FOR ONLINE SUBMISSION OF APPLICATION FORM FOR ADMISSION TEST**

Candidates can submit online form for the Admission Test-2018 at the concerned link of the **website *auadmissions.com*** or Admission-2018 link www.allduniv.ac.in The website has all the information required for online form submission. Online Prospectus: The prospectus for all courses of Admission Test-2018 is available on the concerned link of the ***auadmissions.com*** or Admission-2018 link www.allduniv.ac.in and the admission aspirants can visit the website and download it. Aspirants are advised to read the prospectus carefully before applying.

Requirement for Online Form Submission:

All aspirants filling the online form are advised to read the instructions to fill up the online form, which has all the pre-requisite and the guidelines in this regard. Admission aspirants are required to have following in advance while submitting Application Form :

- i. A scanned copy of their coloured photograph (3.5 x 4.5 cm) and their signature. These scanned copies of coloured photo (3.5 x 4.5 cm) in JPEG (*.JPG) Format and Signature in JPEG (*.JPG) Format are required to be uploaded during the online form submission. The file size of photograph and signature in any case shall not exceed 20 KB for each file separately.
- ii. **Aadhar Number**, in case the candidate is having.



INSTRUCTIONS FOR ON-LINE SUBMISSION:

- i. The address of the web-site is auadmissions.com or Admission-2018 link www.allduniv.ac.in Click the button "Apply Online".
- ii. After opening the website the name of the Entrance Examination, its online starting date for filling up the form, its date of closing will be displayed. The candidate has to opt the class in which he/she wishes to appear in the Entrance Examination.
- iii. Upon opening the website, four buttons will be displayed for downloading the Brochure, and opening the online Application Form, for printing Application form/Challan form and for printing Admit Card. The candidates are advised to read the instructions and click the button to agree and accept the conditions/instructions. Option for printing Admit Card shall be available only from the date given in the schedule for Admission Test.
- iv. The candidate is advised to read the downloaded Brochure before filling up the Application Form. After reading the Brochure carefully the candidate is advised to click the "Apply Online" button. Upon clicking the "Apply Online" button the application form will be displayed on the screen. The candidate is required to fill up the form correctly and as per instructions mentioned in the Brochure. The fields/columns marked with red asterisk are mandatory to be filled.
- v. The scanned copy of photograph and signature as per the specifications mentioned above shall be uploaded at the requisite place in the Application form which is mandatory.
- vi. After filling up the Application Form the candidate can view his filled up application form with the use of preview application form button.
- vii. After ensuring that all the entries have been filled up by the candidate correctly. The candidate can submit the form online by entering the correct image code displayed on the screen.
- viii. The steps for Online Fee payment are as follows :
 - a. After clicking ONLINE option please click submit Application form button.
 - b. The details of payment mode will be displayed then click PAY ONLINE.
 - c. On clicking PAY ONLINE button the applicant will be connected to HDFC gateway for payment.
 - d. Then select Credit Card, Debit Card or Net Banking.
 - e. Then fill the details as required and then submit the application form & get the printout of application form.
- ix. For printing the Admit Card the candidate shall be required to fill in the Application ID and Date of Birth.



| Table - II | |
|---|--------------|
| Numeric Codes For Undergraduate (B.A./B.Sc./B.Com III) Subjects | |
| Subject in B.A./B.Sc. III Year | Numeric Code |
| Ancient History | 01 |
| Economics | 02 |
| Education | 03 |
| English Literature / Language | 04 |
| Hindi | 05 |
| Medieval & Modern History | 06 |
| Music (Vocal, Sitar, Tabla) | 07 |
| B. Music (Vocal, Sitar, Tabla) | 08 |
| Painting | 09 |
| Philosophy | 10 |
| Political Science | 11 |
| Sanskrit | 12 |
| Sociology | 13 |
| Urdu | 14 |
| Botany | 15 |
| Chemistry | 16 |
| Physics | 17 |
| Zoology | 18 |
| Computer (Comp.Sc./Comp. Appl./Comp. Maint.) | 19 |
| Applied Geology | 20 |
| Anthropology | 21 |
| Defence Studies | 22 |
| Geography | 23 |
| Mathematics | 24 |
| Psychology | 25 |
| Statistics | 26 |
| Commerce | 27 |
| Bio-Chemistry | 28 |
| Agricultural Botany/Chemistry/Zoology | 29 |
| Mass Communication | 30 |
| Other Subjects | 00 |

Note: Result will be declared by last week of June. For admission, the candidates should report to the respective department, as per their admission schedule.

For the convenience of the online application Help Desk has been setup

Toll No.: 6386751871,6386751872,6386751873



Syllabus

Ancient History, Culture and Archaeology (1)

Early Cultures and Civilizations of India

Definition of Archaeology and relation with other disciplines; Palaeolithic Cultures : Salient features, Geographical distribution, Belan Valley, Son Valley; Mesolithic Cultures: Salient features, Geographical distribution - Vindhya, Ganga Plains; Neolithic Cultures: Salient features, Geographical distribution-South India, Vindhya and Ganga Plains; Harappan Civilization : Origin and extent, salient features, chronology and decline;

Chalcolithic Cultures-

(a) Central India and Deccan: Kayatha Culture, Ahar Culture, Jorwe Culture

(b) Copper-Hoards and Ochre Colour Pottery (OCP)

Iron Age : Antiquity of Iron ; PGW and NBPW Cultures; Sites: Atranjikhhera, Hastinapur, Kausambi, Taxilla, Arikamedu;

Paper-II: History of India upto the Kushanas (C. 600 B.C.-C.319 A.D.)

Sources: Literary Indian and Foreign sources Epigraphic Numismatic Archaeological sources
Early State Formation

The Mahajanapadas: Rise of Magadha from Bimbisara to Mahapadma Nanda, Persian Invasion, Alexander's Invasion, bases and features of monarchical states; Nature of Republics

Mauyian Empire and its Decline, Magadhan Expansion in the time of Chandragupta Maurya - administration, society and economy in the Mauryan Period; Asoka and his Dhamma; Decline of the Mauryan Empire.

Political Fragmentation C. 200 BC - AD 300

Early History of Sungas and Satavahanas

Achievements of Pushyamitra Sunga and Gautamiputra Satkarni

Saka-Satavahana Struggle, Decline of Satavahana dynasty

Foreign Invasions and Dynasties: Indo-Greeks, Sakas, Pahlavas, and Kushanas : Kaniska -I : date and achievements

Outline of Ancient World Civilizations

Earliest Civilizations-I

Egyptian Civilization: Political development under the Pharaohs; Egyptian Religion, Art and Intellectual Achievements



Earliest Civilizations-II:

Mesopotamian Civilizations: Salient features Sumerian Civilization Babylonian Civilization Assyrian Civilization Chaldean Civilization

Greek Civilization Homeric Age

Periclean Age : Contribution of Pericles

Salient features of Hellenic and Hellenistic Civilizations

Roman Civilization

Julius Caesar and Augustus - Their contributions Roman Culture : Law, Art, Literature, Religion and Science; Roman Legacy

Development of Christianity under Roman Empire.

Ancient Palestine, Iran and China:

Achaemenid Empire; Zarathustra and his reforms

Parthian Civilization, Sassanian Civilization

Chou and Chin Periods: Cultural Achievements Confucius & Lao-Tzu

History of Ancient India (C 319 AD to 1200 AD)

Gupta Dynasty

Gupta Rulers their achievements: Chandragupta-I, Samudragupta, Chandragupta-II, Kumargupta I, Skandagupta and the Huna invasion , Decline of the Guptas,

Vakataka-Gupta Relation, Huna invasion, Maukharis, Later Guptas

Harsha Career and achievements, relation with contemporary rulers, (Harsha's relationship with Pulakesin -II), visit of Hiuen Tsang

Gurjara-Pratihara, Pala, Rastrakuta; Political History of Gurjara Pratihara, Pala and Rastrakuta, Tripartite struggle, Cultural Achievements

Pallava Dynasty; Political and Cultural Achievements of Pallavas Chalukya Dynasty; Political and Cultural Achievements of Chalukyas of Vatapi, Vengi and Kalyani Chola Dynasty Political History, Administration, relations with contemporary powers, Cultural achievements.

Indian Culture

Foundation of Indian Culture; Sources of Study; Definition and Characteristics; Harappan Civilization; Vedic Culture;

Main Features of Ancient Indian Society; Varnasrama System; Ancient Indian Education System, Taxila, Nalanda and Vikramashila; Position of Women; Guilds and their roles, Ancient Indian Religions; Saivism; Vaisnavism; Jainism; Buddhism;



Socio-Spiritual Streams; Sankaracharya; Bhakti Movement; Interaction between Islam and Indian Society with special reference to impact on Indian society

Social and Religious Movements in Nineteenth Century India.

Concepts and Currents in History

Nature and characteristics of history, objectivity and subjectivity in history, causation in history, history is science or art.

Introduction to approaches of history - Oriental, (Colonial), Nationalist, Marxist

Philosophy of history with special reference to Hegel, Ranke, Karl Marx, Spengler, Toyanbee

Nationalism : Germany, Italy, India,

Imperialism and colonialism : World War-II and Revolutions - Russian and Chinese.

Ancient Indian Art and Architecture

Beginnings of Indian Art; Characteristic Features of Ancient Indian Art; Pre-historic Art; Harappan Art & Architectur

Mauryan, Sunga and Kusana Art; Asokan Pillars, Capital Figures, Folk Art; Stupa: Bharhut, Sanchi, Amrawati; Rock-cut Cave Archilctecture (Chaitya/Vihara)-Karle, Bhaja; Kusana Art: Evolution of Buddha Images Mathura Style Gandhara Style;

Gupta Art: Essential features; Beginning of temple Architecture-Bhitargaon temple; Deogarh temple; Ancient Indian Paintings with special reference to Ajanta Temple architectural styles: Nagara, Dravid, Besara

Art & Architecture under; Chalukyas : Aihole, Pattadakal; Chandela: Khajuraho temples; Orissan Temples : Lingaraja and Konark

Art & Architecture under; Rashtrakutas: Kailash Temple of Elora; Pallavas: Rathas of Mahabalipuram; Cholas : Brihadishwara Temple of Tanjavur.

ECONOMICS (2)

Measures of Dispersion-Range, Quartile/Percentile Deviation, Mean Deviation, Standard Deviation, Coefficient of Variation, Lorenz Curve, Measures of skewness and Kurtosis.

Correlation: Linear Rank, Index Numbers: Nature, Construction, Limitation, Importance, Construction of Index Numbers: Simple, Weighted and Price Relative Methods.

Macro Economics:

National Income: its Measurement and Limitations, Nature of National Income Accounts in Closed and Open Economy, Uses of National Income Analysis, Social Accounting, Environmental Accounting.



Theory of Employment, Say's Law of Market, Classical Theory, Keynesian Critique of Classical Theory, Simple Keynesian Theory of Employment and Income Determination, Investment function. Keynesian Consumption Function, Concept of Investment Multiplier.

Nature and Causes of Trade Cycles, Theories of Trade Cycle: Hawtrey, Hayek, Schumpeter. Inflation: types, causes and impact, Inflation Employment Tradeoff: Phillips Curve, Macro Theory of Distribution: Ricardo, Marx and Kaldor.

Theories of Growth: Harrod and Domar Growth Models. Population and Development, Model of H. Leibenstein, the Low Level Equilibrium Trap: Nelson;

Development and Planning:

Development: Meaning, Measurements and Indicators of Development. PQLI, HDI, GDI, GII, Causes of Under-development. Circular Causation: Myrdal and Nurkse, Over-Population. Technological Backwardness, Environment and Development.

Selected Theoretical Prescriptions of Development: Rostow's Stages of Growth, Problem of Choice of Technique. Models of Development: Balanced vs Unbalanced Growth, Hirschman, Rosenstein Rodan, Two Gap Theory.

Measures for Development, Augmentation of Savings, Investment Strategy, Capital Accumulation, Improvement in Technology and Industrialisation, Surplus Labour as a Source of Capital Formation-Lewis and Nurkse, Choice of Technique, Human Capital and Economic Development. Sustainable Development: Meaning and historical Evolution.

Money and Public Finance:

The Quantity Theory of Money: Fisher and Cambridge Approaches. Keynes' Fundamental Equations. An Elementary Treatment of Saving and Investment Approach. Concepts and Components of Money Supply.

Theory of Commercial Banking, Theory of Credit Creation, Credit Multiplier. Theory of Central Banking, Types of Banks- Development, Cooperative, Universal etc. Techniques of Credit Control, The Reserve Bank of India, Control of Commercial Banks & Control of Credit.

Public Finance and Private Finance: Concepts and Problems, Public and Private Goods, Principle of Maximum Social Advantage. Public Expenditure: Nature and Effect. Federal Finance concept, Federal Finance in India, Division of Resources, Finance Commission: Role and objectives.

Taxation: Progressive, Regressive & Proportionate. Direct and Indirect Taxes. Principle of Taxation: Ability to Pay. Least Aggregate Sacrifice, Incidence, Impact and Shifting of Taxation in Perfect Competition and Monopoly.

Economic Analysis:

The Theory of Imperfect Competition, Duopoly, Oligopoly, Collusive and Non-collusive Oligopoly, Cournot, Bertrand, Edgeworth, Stackleberg, Chamberlin's Small Group



Oligopoly Model, The Kindred Demand Curve, Cartels: Joint Profit Maximization and Market Sharing Cartels.

Monopolistic Competition Models, The Criticism of Marginalist Approach to the Theory of the Firm, Welfare Economics: The Criteria of Social Welfare, The National Income Criteria, The Hedonist; The Cardinal Approach to Social Welfare, Pareto Optimality, Kaldor-Hicks Compensation Principle; Bergson's Social Welfare Function.

International Economics:

Basis of International Trade. Theories of International Trade: Adam Smith, Ricardo. J.S. Mill's Theory of Reciprocal Demand. Marshall-Edgeworth Offer Curve, Haberler's Opportunity Cost Theory; Heckscher's Critique of Classical Theory.

Terms of Trade and Gains from Trade: Kinds of Terms of Trade, Factors Influencing Terms of Trade, Prebisch Singer Model, Relation between Terms of Trade and Gains from Trade. Immiserizing Growth Theory. Balance of Payments: Meaning, Definition, and Illustration: Disequilibrium in BOP

Exchange Rates: Purchasing Power Parity Theory, Balance of Payments Theory, Fixed and Flexible Exchange Rates, Spot and Forward. Free Trade and Protection, Exchange Control Infant Industry Argument, Instruments of protection: Tariff, Quota and Devaluation, Exchange Control. Measures for correction in BOP.

India's Economic Policy:

General Objectives of Economic Policy in Developing Countries.

Unemployment and Poverty: A General Overview & Policies

Population Policy : National Population Policy and Population Policy of Uttar Pradesh.

Environmental Problems & National Environment Policy

Industrial Policy : Role and Objectives

Industrial Policy of India

Private and Public Sector

Competition Act

Micro, Small and Medium Enterprises Policies

Energy Sector: Problems and Energy Policy

Agricultural Policy in India: Objectives and Overview

Community Development Project and Panchayati Raj

Rural Development Programme

Agricultural Price Policy

Food Policy and The Public Distribution System



EDUCATION (3)

- 1. Principles of Education:** Meaning and scope of education; Aims of education; Approaches to education; Agencies of education; Curriculum; Educational Planning.
- 2. Problems of Indian Education:** Primary education, secondary education, higher education, adult education; National Policy on Education; Language Controversy.
- 3. Educational Philosophy & Sociology:** Nature, scope and need of philosophy of education; Naturalism, Idealism, Pragmatism, Realism, Existentialism; Educational Sociology; Culture and education; Social Satisfaction; Social Mobility' Social Changes; Futurology.
- 4. Educational Psychology:** Nature, scope and methods and educational psychology; Growth and development; Individual difference; Intelligence;' Creativity; Personality; Learning; transfer of learning; Motivation; Group dynamics
- 5.** Measurement, evaluation and action research in Education, Measure of Central Tendency and Standard Deviation.
- 6. Indian and Western Education:** Sir Syed Ahmed Khan, Madan Mohan Malviya, Tagore, Vivekanand, Mahatama Gandhi, Radhakrishnana, Plato, Rousseau, Dewey, Russel.
- 7.** Environmental education; Educational technology; Distance education; Value education; Peace education; Human rights education; Population education

ENGLISH LITERATURE/LANGUAGE (4)

Note : Candidates can attempt either English Literature or English Language question paper.

Multiple choice questions based on the following in the ratio of 25:25:50 from the syllabic of B.A. Part I, II & III respectively.

POETRY :

- William Shakespeare :
 - Sonnet 29: "When in disgrace with fortune and men's eyes"
 - Sonnet 138 "When my love swears that she is made of truth"
- John Donne: "Canonization"
- John Milton: Paradise Lost (Satan's Speech)
- John Dryden: Absalom and Achitophel, Lines 150-197. (False Achitophel).
- Alexander Pope: "Essay on Man" (Lines 1-18)
- William Blake: The Nurse's Song
- William Wordsworth: (a) "Tintern Abbey", (b) "The World is too much with us"



8. Percy B. Shelley: (a) "Ode to the West Wind" (b) "A Lament"
9. John Keats: (a) "Ode to a Nightingale", (b) "La Belle dame sans merci"
10. Sarojini Naidu: The Flute Player of Brindaban
11. Toru Dutt: "Baughmaree"
12. Rabindra Nath Tagore: From Gitanjali : (a) 11th, Leave the Chanting, (b) 12th Fruit Gathering.
13. Nissim Ezekiel: "Background", "Casually"
14. Frost: "Stopping by the Woods"
15. Walt Whitman: "O Captain, My Captain!"
16. Alfred Lord Tennyson: (a) "Break, Break, Break" ; (b) "Ulysses"
17. Robert Browning: (a) "My Last Duchess" ; (b) "Prospice"
18. Matthew Arnold: (a) "Dover Beach"; (b) "Memorial Verses"
19. Thomas Hardy: (a) "The Darkling Thrush"; (b) "The Voice"
20. Gerard Manley Hopkins: (a) "Pied Beauty" (b) "Thou Art Indeed Just Lord . . ."
21. W. B. Yeats: (a) "The Second Coming" ; (b) "Prayer for My Daughter"
22. T. S. Eliot: "Love Song of Alfred J. Prufrock"
23. W. H. Auden: "In Memory of W. B. Yeats"
24. Adil Jussawala: "Sea Breeze, Bombay"
25. Kamla Das: "An Introduction"
26. Keki N. Daruwalla: "Ghagra in Spate"
27. Derek Walcott (West Indian): "A Far Cry From Africa"
28. Wole Soyinka (Nigerian): "Dragonfly at My Window Pane"
29. Amiri Baraka (African-American): "Wise I"
30. Judith Wright (Australian): "Bora Ring"
31. A. D. Hope (Australia): "Australia"
32. Michael Ondaatje (Sri Lanka/Canada): "Letters and Other Worlds"
33. Eunice de Souza (India): "Autobiographical"
34. Agha Shahid Ali (India): "Postcard from Kashmir" and "A Lost Memory of Delhi"
35. A. K. Ramanujan (India) "Love Poem for a Wife I"
36. Arun Kolatkar (India) "The Priest's Son" and "The Butterfly"
37. Sylvia Plath (America): "Mirror" and "Daddy"
38. Gwendolyn Brooks (America): "The Lovers of the Poor"
39. Emily Dickinson (America): "After Great Pain, A Former Feeling Comes"



40. Sherman Alexie (America): "On the Amtrak from Boston to New York City"
41. Lorna Dee Cervantes (America): "Refugee Ship"
42. **Practical Criticism** : There will be multiple choice questions (MCQs) based on unseen passages of prose and B. A. Part III: English Literature

DRAMA :

George Bernard Shaw: *Arms and the Man*.

Mahesh Dattani: *Where There's a Will*

The following **plays** are prescribed:

William Shakespeare: *Macbeth*

William Shakespeare: *The Merchant of Venice*

T. S. Eliot: *Murder in the Cathedral*

Eugene O'Neill: *Desire Under the Elms*

Harold Pinter: *The Birthday Party*

Girish Karnad: *Hayavadana*

Prose and Fiction:

An Anthology of English Prose edited by the Dept. of English & MEL, University of Allahabad, Macmillan

The following **essays** are prescribed:

1. E. V. Lucas: "Tight Corners"
2. A. G. Gardiner: "In Defence of Ignorance"
3. Robert Lynd: "Student"
4. G. K. Chesterton: "On the Pleasure of No Longer Being Very Young"
5. George Orwell: "Reflections on Gandhi"
6. Aldous Huxley: "Pleasures"
7. J. B. Priestly: "On Doing Nothing"
8. Bertrand Russell: "The Road to Happiness"
9. Richard Wright: "Twelve Million Black Voices"
10. A. C. Benison: "The Art of the Essayist"
11. Francis Bacon: "Of Studies"
12. Proverbs, Chapter XV. (From The Bible)
13. Addison "Will Wimble"
14. Steele "The Spectator Club"
15. Goldsmith: "Beau Tibbs"



16. Johnson, "Letter to Chesterfield"
17. Lamb, "Dream Children"
18. Charlotte Perkins Gilman, "The Yellow Wallpaper"
19. Anita Desai: "A Farewell Party"
20. James Thurber "The Secret Life of Waltermity"
21. Katherine Mansfield "The Fly"
22. Jane Austen: Pride and Prejudice
23. Charles Dickens: David Copperfield
24. E. M. Forster: A Passage to India
25. Salman Rushdie : Haroun and the Sea of Stories

The following novel is prescribed : R. K. Narayan: The Guide, George Orwell: Animal Farm

ENGLISH LANGUAGE

FOR B. A. ENGLISH LANGUAGE SYLLABUS: Please see University website [www.allduniv.ac.in](http://allduniv.ac.in) (http://allduniv.ac.in/departments/english_and_modern_european_languages)

(CLICK ENGLISH DEPARTMENT AND OPEN SYLLABUS COLUMN)

HINDI (05)

Hindi Sahitya ka Itihas, Bhasha Vigyan, Bhartiya Kavyashastra, Pashchatya Kavyashastra, Kavyabhasha, Aalochana aur Shahitya Chintan ki Nai Dishayen.

MEDIEVAL AND MODERN HISTORY (06)

SECTION A : HISTORY OF THE MODERN WORLD (1453-1945) : A survey of the Political, Social Economic and Cultural history of the Modern World,

SECTION B : HISTORY OF MEDIEVAL INDIA (1206-1740)

SECTION C : HISTORY OF THE MODERN INDIA (1740-1950)

M. A. (MUSIC) (07)

(VOCAL)

1. Detailed study of the following Ragas:

Puriya, Marwa, Jai-Jaiwanti, Suddha Kalyan, Deshkar, Kamod, Chayanat, Todi, Multani, Miyan-Malhar, Gound-Malhar, Adana, Darbari Kanhada, Basant, Paraj, Puriya Dhanashri, Shri, Hindol, Suddha Sarang, Madhuwanti.



2. Taal

Rupak, Teevra, Dadra, Kaharwa, Trital, Jhaptal Ektal, Dharmar, Ada Chartal, Pancham Sawari, Gaj jhampa, Chartala, Sooltal, Deepchandi, Jhoompa, Tilwada.

3. Details introduction of all the Ragas and Taalas mentioned above.
4. Comparative study of the Samprakit Ragas and Taalas.
5. Study of Alpatva and Bahutva, Tirobhav and their use and importance.
6. Laya and layakari- Different types of Layakaries, Dugun, Tigun Chaugun and Ada.
7. Different styles of Gayaki - Dhruvapad, Dhamar, Tappa, Thumari and Chaiti.
8. Brief study of different Gharanas of Vocal Music.
9. Life sketch and contribution of Eminent Musicians and Vocalist.
10. **Vibration and frequency**, pitch and its relation with vibrator, Amplitude, (Swaymbhu Swar); Consonance and Dissonance, Main Types of chords, Absorption, echo, Reverberation and Resonance of sound, Placement of Sudha and Vikrit Swars on different shruties according to Lochan, Ahobal, Pundarik, Ramamatya, Somnath.
11. Notation system of Bhatkhande and Vishnudigambar, various types of intervals of notes. Different Musical scales, comparative study of Notation System of Bhatkhande and Western Music, placement of notes on „Veena’ according to Pt. Srinivas, Comparative study of Northern Sothern Talapaddhaties.
12. Biographies of Bhatkhande, Vishnudigambar, Tansen, Ustad Vilayat Khan, Ameer Khusroo, Pt. Ravi Shankar, Pt. Ram Sahai, Ahmad Jan Thirakwa, Nana Sahib Pansse.
13. History of Music and classification of Ragas and Taals. History of Music of Ancient period up to 13th century. Short History of Music of Medieval and Modern periods. Comparison of Hindustani and Karnataka Music Systems. Gram, Moorchana its kind and their importance. Kind of Gamaka. Brief knowledge of Different Gharanas.

(INSTRUMENTAL SITAR)

1. Detailed study of the following Ragas:

Puriya, Marwa, Jai-Jaiwanti, Suddha Kalyan, Deshkar, Kamod, Chayanat, Todi, Multani, Miyan-Malhar, Gound-Malhar, Adana, Darbari Kanhada, Basant, Paraj, Puriya Dhanashri, Shri, Hindol, Suddha Sarang, Madhuwanti.

2. Taalas

Rupak, Teevra, Dadra, Kaharwa, Trital, Jhaptal Ektal, Dharmar, Ada Chartal, Pancham Sawari, Gaj jhampa, Chartala, Sooltal, Deepchandi, Jhoompa, Tilwada.



3. **Details introduction of all the Ragas and Taalas mentioned above.**
4. **Comparative study of the Samprakit Ragas and Taalas.**
5. **Study of Alpatva and Bahutva, Tirobhav-Avirbhav and their use and importance.**
6. **Laya and layakari- Different types of Layakaries, Dugun, Tigun Chaugun and Ada.**
7. **Different styles and Baj - Maseetkhani, Razakhani, Firozkhani etc.**
8. **Brief study of different Gharanas of Sitar.**
9. **Life sketch and contribution of Eminent Musicians and Instrumentalists.**
10. **Vibration** and frequency, pitch and its relation with vibrator, Amplitude, (Swaymbhu Swar); Consonance and Dissonance, Main Types of chords, Absorption, echo, Reverberation and Resonance of sound, Placement of Sudha and Vikrit Swars on different shruties according to Lochan, Ahobal, Pundarik, Ramamatya, Somnath.
11. Notation system of Bhatkhande and Vishnudigambar, various types of intervals of notes. Different Musical scales, comparative study of Notation System of Bhatkhande and Western Music, placement of notes on 'Veena' according to Pt. Srinivas, Comparative study of Northern Sothern Talapaddhaties.
12. Biographies of Bhatkhande, Vishnudigambar, Tansen, Ustad Vilayat Khan, Ameer Khusroo, Pt. Ravi Shankar, Pt. Nikhil Banerjee.
13. History of Music and classification of Ragas and Taals. History of Music of Ancient period up to 13th century. Short History of Music of Medieval and Modern periods. Comparison of Hindustani and Karnataka Music Systems. Gram, Moorchana its kind and their importance. Kind of Gamaka. Brief knowledge of Different Gharanas.

(INSTRUMENTAL TABLA)

1. **Detailed study of the following Taalas :** Trital, Jhaptal, Rupak, Teevra, Sooltal, Ektal, Chartal Basant, Pancham Swari, Gaj Jhampa, Dhamar, Laxmi, Rudra, Shikhar, Brahma, Kurnbha, ganesh, Matt, Dadra and Kaharwa, Jat Taal, Deepchandi Taal.
2. Kayada, Palta, Peshkar, Rela, 'Laggi-Ladi', Paran, different types of Chakkardar, Tihai, and paran, Tripalli, Choupalli, Nauhakka, Jhoolna ke Bol, Gat- Farad, Mukhda, Mohra.
3. Ten Varnas of Tabla.
4. Study of Sam Matrik and Samprakrit Taalas.
5. Different Gharanas of Tabla playing with their style and Baj.
6. Life sketch and contribution of Eminent Musicians and Musicologist.
7. Laya-Layakari, different kinds of Layakaries, Dugun, Tigun, Chaugun, Aad, Kuada, Biyad etc.
8. Life sketch and style of playing leading Tabla Artists, Padam Bhushan Pt. Samta Prasad, Padam Vibhushan Pt. Kishan Maharaj .



9. Vibration and frequency, pitch and its relation with vibrator, Amplitude, (Swaymbhu Swear); Consonance and Dissonance, Main Types of chords, Absorption, echo, Reverberation and Resonance of sound, Placement of Sudha and Vikrit Swars on different shruties according to Lochan, Ahobal, Pundarik, Ramamatya, Somnath.
10. Notation system of Bhatkhande and Vishnudigambar, various types of intervals of notes. Different Musical scales, comparative study of Notation System of Bhatkhande and Western Music, placement of notes on 'Veena' according to Pt. Srinivas, Comparative study of Northern Sothern Talapaddhaties.
11. Biographies of Bhatkhande, Vishnudigambar, Tansen, Ameer Khusroo, Pt. Ram Sahai, Ahmad Jan Thirakwa, Nana Sahib Panse.
12. History of Music and classification of Ragas and Taals. History of Music of Ancient period up to 13th century. Short History of Music of Medieval and Modern periods. Comparison of Hindustani and Karnataka Music Systems. Gram, Moorchana its kind and their importance. Kinds of Yati. Brief knowledge of Different Gharanas.
13. Gharana of Tabla
 - Tabla Aur Pakhawaj Ka Tulnatmak Adhyayan.
 - Classification of Instruments.
 - Taal Ka Manovaijyanik Prabhav.

M.A. (PAINTING) (08)

Theory : (conducted by the University)

Syllabus : Aesthetics & Art Appreciation (Indian and Western)

History of Indian Art (Pre-history to Modern)

History of Western Art (Pre-history to Modern)

Folk, Tribal and current trends in Art Scenario.

Practical : (conducted by the Department)

For admission in M.A. in Painting candidate has to appear in Practical Drawing Test of 100 marks. Time: 120 minutes of 100 marks in any medium.

(The candidates are advised to contact the Head, Visual Arts for Practical Test)

PHILOSOPHY (09)

1. Ethics
2. Indian Philosophy
3. Western Philosophy
4. Logic
5. Theory of Knowledge
6. Philosophy of Religion
7. Socio-Political Philosophy



POLITICAL SCIENCE (10)

POLITICAL THEORY :

Definition, Nature and Scope of Pol. Science, Nomenclature relation with other social sciences, Different approaches idealistic, Individualistic, Liberal, Social Welfare, Contemporary Libertarian Concept, Gandhian Concept and Marxian view of state, Sovereignty, Nation and Nationalism , Challenges before nation-state, Globalisation and emergence of civil society, Concept of liberty, equality, law, rights, justice, punishment and citizenship, evolutionary socialism, Marxism, Fascism, Democracy and Communitarianism.

INDIAN GOVERNMENT AND POLITICS:

The constituent assembly, Preamble, Main features of Indian Constitution, Procedure to amend the Constitution, Federalism, Fundamental Rights, Directive Principles of State Policy, Fundamental Duties.

President, Prime Minister and Council of Ministers, Parliament, Judiciary, Judicial, Review and Activism, Governor, Chief Minister, Council of Ministers, State Legislature, Panchayati Raj and Urban Local Bodies, Party System in India.

WESTERN POLITICAL THOUGHT:

Features of Ancient Greek Political Thought, Plato, Aristotle, Aquinas, Machiavelli, Bodin, Hobbes, Locke and Rousseau, Bentham, Mill, Green, Hegel, Marx, Lenin, Mao.

COMPARATIVE GOVERNMENT AND POLITICS:

Meaning, approaches, nature and scope of comparative government and politics. Constitutionalism, Rule of Law, Legislature Executive and Judiciary, Organisation of Government- Unitary, Federal, Parliamentary and Presidential Democracy, Democracy Dictatorship, Local Self Government, Political Culture and Socialization, Political Parties, Pressure Groups, Electoral Process, Public opinion and Bureaucracy.

INDIAN POLITICAL THINKERS:

Features of Ancient Indian Political Thought, Political Ideas of Manu, Kautilya, Features of Jain and Buddhist Political Thought, Political Ideas of Mahabharat, Indian Renaissance and Political Ideas of Raja Ram Mohan Roy, Dayanand and Vivekanand, Political Ideas of Tilak, Arvindo Ghosh, M.N. Roy and Jai Prakash, Jawahar Lal Nehru, Mahatama Gandhi and B.R. Ambedkar.

INTERNATIONAL RELATIONS:

The study of International Relations, Role of State and Non-State Actors, Cold War, Feature of present world order, Globalisation and impact on world politics, Problem of Third World



Security, NAM, North-South Dialogues, ASEAN and SAARC, International Terrorism, Nuclear Proliferation, Disarmament and Arms Control, Collective Security, Indian Foreign Policy, Indo-US Relations.

INDIAN ADMINISTRATION:

Meaning, scope and significance of Public Administration, NPA and NPM Organisation, Ecology of Indian Administration, Structure of organisation (Central and Cabinet Secretariats, P.M.O.), Centre-State Relations, Public sector undertakings, Parliamentary Control over financial Administration, Growth of civil services in India, D.M. and O&M, 73rd - 74th Constitutional amendment Acts, welfare administration for- S.C., S.T. and Women, Generalist- Specialist, Controversy, Problem of corruption, Lokpal and Lok Ayukta, Minister-Civil Servant relationship.

Note: For details please see the syllabus of U.G. Pol. Science University of Allahabad.

SANSKRIT (11)

Group - A

- (i) AbhijnanShakuntalam-upto VAct
- (ii) Poorva Megh- Upto 30 slokas
- (iii) Kiratarjunyam-Prathamah sargah
- (iv) Kadambari Kathapuram Prabhatvarna Paryanta
- (v) Following Suktas of Rigvedas:
 - (a) Vishvedeva Suktam,
 - (b) Vishun Suktam
 - (c) Indra Suktam
 - (d) Prajapati Suktam
 - (e) Purush Suktam
 - (f) Vak suktam
 - (g) Shivsankalpa Suktam From Shukla Yajurveda)
- (vi) Sangya & Sandhi prakaranas of Laghu Siddhanta kaumudi
- (vii) Niti Shatak- Upto 30 Slokas

Group - B

- (i) Sahitya Darpan (First & Second Parichchheda only)
- (ii) Uttar Ram Charitam- Upto Third Act



- (iii) Tark Sangraha
- (iv) Sri Mad Bhagwad Geeta (Second, Third & Nineth Chapter only)
- (v) Karak Prakaran of Madhya Siddhant Kaumudi (Practical Knowledge only)

SOCIOLOGY (12)

EMERGENCE OF SOCIOLOGY AND PIONEER THINKERS: Emergence of Sociology (Definition, Nature, Scope and Subject Matter of Sociology) and its Relationship with other Social Sciences; Works of Comte (Positivism), Spencer (Social Darwinism), Durkheim (Social Facts, Solidarity, and Suicide), Weber (Social Action, Authority, Idea, Type, Protestant Ethics and the Spirit of Capitalism), Marx (Materialistic Conception of History, Class Struggle, Alienation), Pareto (Circulation of Elites), Parsons (Social Action and AGIL) and Merton (Functional Analysis).

BASIC CONCEPT: Society, community, Culture, Civilization; Socialization - Agencies and Theories; Social Structure and Function; Institution and Association; Social Group and Its Types; Customs, Norms, Values, Sanctions and Laws; Status, Role and its Types.

SOCIOLOGICAL PERSPECTIVES: Evolutionary, Structural, Functional, Conflict and Interactional.

INSTITUTIONS : Kinship and Its Types, Forms and Usages; Family and Its type; Marriage and Its Types; Economy and Its Forms-Urban, Rural and Tribal Economy (Primitive communism, Concept of Property and Ceremonial Exchange among Tribes- Potlatch and Kula Ring, Division of labour, Jajmani Relations); Religion - Theories and Forms of Religion, Magic, and Religion and Science; Political - Elites and Leaders, Political Parties, Caste Panchayat and Panchayati Raj Institutions (PRIs); Education as a Social System.

SOCIO-CULTURAL PROCESS AND CHANGES: Cultural lag, Assimilation, Acculturation, Cooperation, Competition, Conflict; Universalization and Parochialization, Sanskritization, Westernization, Modernization and Secularization; Meaning of Social Changes and Its Types (progress, Development, Growth, Evolution and Revolution); Theories and Factors of (Demographic, Biological, Economic, Technological and Cultural) of Social Change; Approaches to Development.

STRATIFICATION, MOBILITY AND SOCIAL MOVEMENT: Meaning of Stratification - Its Forms and Theories (Functional, Conflict, Weberian); Social Mobility and Its Type; Meaning and Theories of Caste, Caste as a Unit and caste as a System, Dominant Caste, Changing Dimension of Caste and Class; Meaning of Social Movement and its types.



SOCIAL RESEARCH: Objectivity and Subjectivity in Social Sciences, Positivism and Empiricism in Sociology, Sociological, Explanations, Types of research, Steps in Social Research; Research Designs (Exploratory, Descriptive and experimental); Methodology, Method & Techniques: Ethnography, Observation, Case study, Content Analysis, Survey, Sampling, Questionnaire, Schedule and Interview; Data Analysis - Measures of central tendency, Correlation and Chi-Square.

UNDERSTANDING INDIAN SOCIETY AND VARIOUS SOCIAL ISSUES : Eminent, Indian Thinkers on Indian Social System; Unity in Diversity - Language, Religion, Caste and Cultural Pattern;

Varnasharama System, Purushartha, Joti and Varma; Issues on Villages, Towns and Cities; tribes, Dalits, Women and Minorities, Racial and Physical Distribution of Tribes in India; tribe-Caste Continuum; Rural-Urban Continuum; Social Problems and Their remedies - Religious, Ethnic and Regional, OBC, SC, ST, Women and Minorities, Dowry, Domestic Violence, Intra and Inter-Generational Relations, Communalism, Terrorism and Corruption; Social Disorganization - crime and Delinquency, Theories of Crime, White Collar Crime, Theories and Types of Punishment; Nation- building and Ethnic Identities, Development induced Displacement and Environmental Issues.

URDU (13)

Syllabus of Urdu subject (Graduation level course) of University of Allahabad

BOTANY (14)

Fungi; Lichens; Bacteria and Plant Viruses; Algae; Bryophyte; Pteridophyta; Gymnospermophyta; Taxonomy; Morphology & Anatomy; Life History; Plant Physiology; Plant Ecology; Cytology; Genetics; Molecular Biology; Evolution; Microbiology And Applied Microbiology; Genetic Engineering, Plant Pathology; Economic Botany; Applied Plant Anatomy; Plant Breeding; Marine Biology & Limnology; Palaeobotany and Palynology; Plant Diversification; Morphogenesis and Tissue Culture.

CHEMISTRY (15)

A (PHYSICAL CHEMISTRY)

Thermodynamics, Chemical Kinetics, and Catalysis, Chain Reactions and Photochemistry, Electro-Chemistry, Atomic Structure, Gases State, Surface Phenomena.



B (ORGANIC CHEMISTRY)

Bonding in Carbon Compounds, Aromaticity and Huckel's rule, Aliphatic and Aromatic Aldehydes and Ketones (i) Optical Isomerism (ii) Geometrical Isomerism, Active Methylene Compounds, Spectroscopy U.V. Visible, IR, NMR, Cycloparaffins, Carbohydrates, Diazonium Compounds, Synthetic Polymers, Synthetic applications of Grignard reagents.

C (INORGANIC CHEMISTRY)

Atomic Structures and Periodic Properties, Chemical Bonding and Molecular Structure, Co-ordination Chemistry, Chemistry of Representative Elements, Transition metals including Lanthanides, Extractive Metallurgy, Environmental Pollution, Metal Ions in Biological Systems, Preparation, Properties and Structures, Inorganic Analysis.

PHYSICS (16)

Thermodynamic equilibrium, Zeroth law, first law, second law, reversible process, Carnot's theorem, entropy and disorder; thermodynamic relations and applications. Clausius-Clayperon equation, phase transitions of first and second order.

Radiation as e.m. wave, Kirchhoffs law. black body radiation, pressure and energy density, Stefan-Boltzmann law, Planck's law and its limiting cases. Phase space, ensembles, equilibrium and fluctuation, entropy and probability, entropy of a perfect gas, microcanonical, canonical and grand canonical ensembles, partition function, Boltzmann distribution, B.E. and FD. statistics, simple applications.

Gauss' Law, Blot-Savart law, Vector Potential, Faraday law. Amperes circuital law, generalization of Ampere's law by Maxwell, Maxwell's equations and its solution in free space and simple dielectrics. Poynting theorem, plane wave propagation in metals and plasmas.

Interference Diffraction Special theory of Relativity Uncertainty principle

Linear Harmonic oscillator, Angular momentum, commutation relations, Ladder operators eigenvalues of L , and L_z , Parity operator Hydrogen atom problem, Pauli spin matrices.

Time-independent non-degenerate perturbation theory and its simple applications, Identical particles, symmetric and anti-symmetric wave function.

Crystalline state of solids, unit cell, bravais lattice, reciprocal lattice, interatomic forces, vibrations of monoatomic and diatomic chains, phonons.

Free electron theory of metals, electrons in periodic potential, Bloch waves, semiconductors, p-n junction, diode, rectification, ripple factor, Transistor action and



characteristics, C.E. amplifiers and its frequency response. Logic gates, Boolean algebra, Combination logic, Integrated Circuits. Solar Cell, Amplitude modulation.

Laser: Stimulated and spontaneous emission. Einstein's coefficients, relative contribution of stimulated and spontaneous emissions, population inversion, Laser emission, characteristic of Laser light (including temporal), Amplification in an inverted medium, threshold condition for lasing.

Holography: Basic principles of Holography, Recording and Viewing of a hologram. Thick Hologram, Multiplex hologram, White light reflection holograms.

Optical Instruments: Introduction of multiple beam interferometry, Fabry-perot interferometer and etalon (resolving power and determination of wavelengths), Resolving power of Lumer Gehreck plate, Grating and prism spectrograph for visible, IR and UV regions.

Atomic Physics: Bohr-Sommerfield Model (Historical developments), Bohr model and the spectra of hydrogenic atoms, Critical resonance and the Ionisation potentials. Frank-Hertz experiment. Characteristic and continuous X-rays, Moseley's law, Bragg's law.

Space Quantization, Vector atom model and Quantum Numbers, Magnetic moment of the electrons and magneton, Larmor Precession, Electron Spin, Stern-Gerlach experiment, Qualitative concept of various quantum number of an electron, Pauli's exclusion principle and electronic configuration of atoms.

Magnetic Properties of Materials :

Diamagnetism, Larmor's theory and diamagnetic susceptibility. Paramagnetism, Langevin's theory and Curie-Weiss Law, Qualitative discussion of Ferromagnetism and antiferromagnetism.

Quantum Concepts:

Particle nature of radiation, Photoelectric effect and Compton effect. Wave nature of particles. De-Broglie Waves, Davisson-Germer experiment, Wave Packets, Phase velocity and group velocity, Heisenberg's Uncertainty Principle and applications, One dimensional Schrodinger's Wave Equation and concept of probabilities, amplitude, application to onedimensional potential step and barrier. Quantum Mechanical Tunneling.

Nuclear Physics:

Natural radioactivity, Laws of radioactive disintegration, radioactive series, Detection of radiation, GM Counter and Bubble Chamber, Scintillation Counter.

Kinematics of nuclear reactions, artificial nuclear transmutation, discovery of neutron, radioactive tracers, transuranic elements. Cyclotron Constitution of nucleus, Binding energy,



liquid drop model and the semiempirical mass formula, Elementary theory of α -decay, β -decay and discovery of neutrino Magic numbers and the shell model, exchange forces in nuclei and Yukawa theory (qualitative), Fission and fusion, Nuclear reactors (qualitative), Thermonuclear energy. Classification of Elementary Particles, Leptons, mesons and baryons and their quantum numbers, Conservation Laws.

ZOOLOGY (17)

Nonchordates, Taxonomy and Evolution, Physiology and Biochemistry, Protochordates and Vertebrates.

Special Topics

Sphenodon as living fossil, Biting mechanism of poisonous snake; snake venom and antivenin. Flight adaptations of birds, Aquatic mammals.

Animal Distribution and Ecology, Genetics and Cell Biology, Molecular Biology and Genetic Engineering, Economic Zoology and Environmental Biology, Development Biology and Ethology.

COMPUTER SCIENCE (18)

PGAT 2018 Syllabus (M. Sc. Computer Science Course)

1. BASIC ELECTRONICS :

Boolean Algebra: Decimal, Binary, Octal and Hexadecimal Numbers and their interconversion, Boolean Expressions, Truth table representation, SOP and POS forms, Theorems of Boolean Algebra and their use in simplification of Boolean Expressions, Karnaugh map method and its use in simplification of logic expressions.

Logic Gates and Logic Families: Basic logic gates, Elementary idea of commonly used logic families, Working of Standard TTL logic gates, , Implementing Logic circuit using Basic/Universal logic gates.

Combinational Circuits and their Implementation: Adder, Subtractor, Parity Generator, Encoder, Decoder, Multiplexer and De-multiplexer Circuits, Combinational circuit design using multiplexer.

Sequential Circuits and their Implementation: Characteristics & Excitation table of RS,JK, T and D Flip flop, Clocked and Edge triggered Flip flops; Ripple counters and Synchronous counters; Binary, BCD and modulo counters, Shift Registers.

2. COMPUTER FUNDAMENTALS :



Generation of Computers: Functional Block Diagram of a Computer; Types of Computer, Hardware and Software, Components of a system: memory, CPU, I/O, Basic I/O methods, Generations of Computer, Generation of Programming languages, Language Translators - Compiler, Interpreter & Assembler, Hardware and Software, Application vs System Software, Operating System and its functions. Single user, multi-user, time-shared system.

Computer Memory: Concept of sequential and random storage, RAM, ROM, EPROM, Auxiliary storage devices, Magnetic and optical discs. Cache memory, virtual memory.

I/O Devices and Interfacing: Serial and parallel communication, Interfacing, Types of buses, I/O devices- keyboard, mouse, light pen, touch screen, VDU, LCD, dot matrix, laser and ink jet printers, plotters.

3. COMPUTER ARCHITECTURE AND ORGANIZATION :

Data Representation, Signed numbers, fixed and floating point numbers, binary number addition, subtraction, multiplication and division, 1s and 2s complement method.

Basic Computer Organization: CPU, Registers, ALU, System Buses, Memory organization and interleaving, memory hierarchy, Memory mapped and standard I/O, Programmed I/O, Interrupt driven I/O and DMA.

Microprocessor Architecture: 8085 microprocessor architecture, pin diagram, Interrupts, Instructions, Addressing modes.

4. PROGRAMMING IN C :

Flowchart representation, algorithm, Stages in Program development; Low, middle and high level languages; Languages translators; Syntax and logical errors.

Features of C Language: Variables, Data types, Operator, storage classes, Expressions, Library functions, C pre-processor, Control flow, arrays; structures; I/O operations, functions, macros, files and pointers.

5. DATA STRUCTURE :

Data structures, Representation and Implementation, Complexity calculation of algorithms, Linearity and Non-linearity of data structures.



Linear Data Structures : Arrays, Ordered lists and their representations, List operations- Insertion, Deletion, Traversal; Stacks, Queues, Priority Queues, Linked lists, Doubly linked lists, Sparse matrix, representation

Non-Linear data Structure: Binary Trees and their representation, Binary Tree traversals, Threaded Binary trees, Height balancing and AVL tree, union and find algorithms, Decision tree, Graphs and their representations, Graph search, Graph traversal, Connected Components and spanning trees, Shortest path.

Searching and Sorting: Sequential search Binary search, Hashing, Chaining and symbol tables, Collision processing, Indexed search techniques, Bubble, Insertion, Quick, Radix and Heap Sort

6. COMPUTER NETWORKS :

Channel capacity, Baud & bit rate; Maximum data rate of a channel; MUX:TDM, FDM; Synchronous & asynchronous transmission; Data Transmission modes

The electrical Interface: Attenuation & distortion sources, Signal types, Signal propagation delay, Transmission media-Wired & wireless, comparison of different transmission media, Concepts of modulation- AM, FM, PM, Digital signal modulation vs Analog signal modulation, Baseband & Broadband transmission.

Data Networks: Circuit switching, Message Switching & Packet switching; Virtual circuit vs circuit switching; Network topology; Linear, Circular, Star, Tree & Graph, Ethernet, Token ring, Token bus & FDDI, ATM, Role of ATM in inter-networks; Network Protocol basics; Error control & link management; data link control protocols bit oriented & character oriented protocols; OSI model TCP/IP.

Error detection & correction: Asynchronous data error detection; Data correction using parity, Error detection for synchronous transmission; Checksum error detection; Hamming code, CRC.

Network components: Switches, Hubs, Concentrators, Modem, Network interface card, Repeaters, Bridges, Routes and Gateways.

ANTHROPOLOGY (19)

GENERAL ANTHROPOLOGY

Meaning and Scope of Anthropology: Branch of Anthropology, a) Social-Culture



Anthropology, b) Physical/Biological Anthropology, c) Archaeological Anthropology, d) Linguistic Anthropology.

Relations of Anthropology with other disciplines: Life Sciences, Earth Sciences, Medical Sciences; Social Sciences and Humanities.

The Basic terms and Concepts in Anthropology: Culture, Society, Association, Institution, Culture change, Socialization, Mutation, Paleoanthropology, Geological time Scale, Glaciations and Pluviations, Pleistocene.

SOCIAL-CULTURE ANTHROPOLOGY

Definition and types of Marriage, Family, Kinship:

Economic and Political Anthropology: Meaning and Scope.

Religion and Magic: Definition and Meaning.

The Basic of Indian Social System

Indian Village

Major Concepts in Indian Anthropology: Dominant Caste, Sanskritisation, Westernization, Sacred Complex, Nature-Man-Spirit complex, Little and Great Tradition, tribe-caste continuum.

Special Constitutional Provisions, Problems and welfare measures related to tribes.

Theories of Social-Cultural anthropology : Evolutionism, Diffusionism, Functionalism, Culture and Personality, Contributions of the following Anthropologists: a) Robert Redfield, b) V. Durkheim, c) L.P. Vidhyarthi, d) M.N. Srinivas.

Fieldwork Tradition in Anthropology

Major tools of Research : Observation, Interview, Case Study, Life History, Survey Research, Schedule and Questionnaire, geological Method.

PHYSICAL ANTHROPOLOGY

Theory of Organic Evolution: Lamarckism, Neo-Lamarckism, Darwinism, Neo- Darwinism, Synthetic theory of Evolution.

Position of man in animal kingdom: distribution, classification and physical characters of Primate

Comparative Anatomy of Man and Ape Fossil evidences of emergence of man:

- (a) Dryopithecine complex
- (b) Australopithecine complex
- (c) Pithecanthropus, Sinanthropus
- (d) Neanderthal, Cro Magnon



Concept of Race : Criteria of Racial classification, Genetic basis of race, Racial classification of Indian **Population** (Guha's Classification).

Human Genetics : Basic Concept of Genetics, Mendelian Principles with reference to human. **Bio-Statistics**- Measures of Central Tendency: Mean, Median, Mode, and Standard Deviation.

ARCHAEOLOGICAL ANTHROPOLOGY

Concept: History, Pre-History, and Proto-history.

Methods of Dating : Relative and Absolute methods.

Tool making techniques and tool topology.

Paleolithic, Mesolithic and Neolithic Culture of Europe.

Indus Valley Civilization: Main features, Town planning, economy, Polity, religion, Art & Craft, and Causes of Decline.

DEFENCE & STRATEGIC STUDIES (20)

Art of Warfare in Indian, Contemporary Study of War and Peace, Indian Military History, World Military History, Strategic Thought, National Security, Science, Technology and National Security, Current Development related to India's Defence and Security.

GEOGRAPHY (21)

Lithosphere: Origin of the earth, Geological history of earth; Interior of the earth; Rocks; Endogenetic and Exogenetic Forces, Volcanic and Earthquakes; Drainage pattern; Origin of Continents, Mountain Building, Plate Tectonic Theory, cycle of erosion & Interruption; Mass movement of rock wastes; Landforms formed by running water, wind, coastal, glacier and peri-glacier.

Atmosphere: Structure and composition of the atmosphere; Insolation; Pressure belts and winds; Local winds; Origin of Monsoons; Humidity and rainfall; El Nino phenomena-Jet Stream, Tropical and temperate cyclones, Koeppen & Thonthwaite classification of world climates; Major climatics.

Hydrosphere: Continental shelf, continental slope, deep sea plains and ocean deeps; Bottom relief of Atlantic and Indian Oceans; salinity; tides; ocean currents; coral reefs.

Human Geography : Nature, Scope, Development, Branches and Approaches of human geography; Man and Environment Relationship - Determinism, Neo-determinism, Possibilism, Neo-determinism & Human ecology of Mountains & Deserts and Probalism; Approaches - ecological, spatial, behavioural and welfare; Human adaptation, Races & Tribes; Types of farming; agricultural regions of the world; Production & distribution iron



ore, coal, petroleum, Hydroelectricity, Iron and steel, Cotton textile and Chemical, fishing industry, Social groups and

organization; Diffusion of Cultures; Cultural hearths; Major cultural realms,

Population Geography : Population - growth and demographic transition, distribution and density pattern; Structure and Composition of population; Migration of population in India & World; Population policy in India. Over population, under population; optimum population; population -- resource regions; population problems in India; population planning and control

Settlement Geography: Rural settlements - types and patterns, size, spacing and morphology; distribution of rural settlements in Ganga plain; Urban settlements -- types and patterns, size, spacing and morphology; Classification of towns. Central place theory, Trends of urbanization in the world and in India; Problems of urbanization in India; Urban policy in India.

Regional Geography of India: Structure, relief and drainage; climate, origin of monsoon, droughts and floods, climatic classification by Koppen and Thornthwaite; soil types and distribution; Major minerals (iron ore, mica, Copper, manganese, bauxite and atomic minerals) - distribution, production and utilization; distribution and production of coal, mineral oil and hydel power; irrigation, agricultural regions, green and white revolution and agro-climatic regions. Industrial localization with reference to iron and steel, cotton textile, sugar, cement and chemical, and paper industries, Industrial regions; foreign trade.

Regional Geography of World: Concept of regions in geography; Types and Classification of regions, Criteria of delimitation and characteristics of natural, cultural, economic and political regions. **Asia** Structure; relief; drainage; climate; natural vegetation and soils; spatial distribution of population; economic base; Regional studies of south, south-east, east and west Asia. **Europe:** Physical, economic and demographic characteristics; Regional studies of British Isles, Eastern, Western and Mediterranean realm. **North /South America and Australia:** Physical, economic and demographic set up; Regional studies of USA, Canada, Brazil and Australia.

History of Geographical Thought: Meaning and scope of geography; Changing philosophy, Approaches to the study of geography Contributions of Greek, Roman, Indian, Chinese, Arabs, Period of Dark Ages & Renaissance, Contributions of German, French, British, American and Russian, Dichotomies in geography, Fundamental concepts in physical, human, economic and settlement geography.

Practical: Statistical Techniques - Mean, Median Mode, Mean & Standard Deviation, CV, Correlation, Regression, Chai-square & Students't test, nearest neighbor, quadrate count, mean centre, standard distance, drainage & transport network. Projection: Conical Two



standard, Bonnes', Polyconic, Cylindrical - Mercator & Equal Area, Zenithal - Equidistant Polar & Stereographic. Mapping - Choropleth, Isoleth, Proportional Circle, Dot method. Graphical Representation: Hythergraph, Climograph, Histogram Scatter graph, Bar graph. Surveying: Plane Table, Prismatic, Indian Clinometer & Telescopic Alidade.

MATHEMATICS (22)

Geometry: Straight lines and planes, Spheres, Cones and cylinders, Central conicoids, Generating lines, Conics in polar coordinates.

Algebra: Sets, Relations and Maps, Groups, Cyclic groups, Normal subgroups and quotient groups, Lagrange's theorem, Symmetric and alternating groups, isomorphism theorems, Rings, Integral domains and Fields, Ideals and quotient rings, Polynomial rings, Linear and quadratic congruences, Legendre symbol, Arithmetic functions.

Analysis: Real number system, convergence of sequences and infinite series of real numbers, absolute and conditional convergence, Limits, continuity and differentiability of functions of one real variable, Mean value theorems and their applications, Riemann integrals, Convergence of improper integrals.

Limit, continuity, Partial and directional derivatives, Differentiability of functions of several real variables, Mean value theorems and Taylor's theorem for functions of several real variables, Jacobians, Inverse and Implicit function theorem, Convergence and uniform convergence of sequences and series of functions, Basic concepts in metric spaces, compactness in metric spaces, complex analytic functions.

Differential Equations: Differential Equations of first order and their applications, Equations of higher degree, Singular solutions, Linear differential equations of higher order, Variation of parameters, Linear systems of first order, Existence and uniqueness theorems for solutions of differential equations.

Vector Calculus: Scalar and Vector fields, Gradient, Divergence and Curl, Line integrals, Double integrals, Surface integrals and Volume integrals, Gauss', Stokes' and Green's theorems and their applications.

Linear Algebra: Vector spaces, Subspaces, Linear independence, Linear span, Bases and Dimension. Linear transformations and Matrices, Rank-Nullity Theorem, Systems of Linear Equations, Gauss elimination, Normal and Echelon form of a matrix, Determinant, Cramer's Rule, Eigenvalues and eigenvectors, Cayley-Hamilton Theorem, Diagonalization, Inner product spaces, Bilinear and quadratic Forms.

Mechanics: Virtual work, Catenary, Simple harmonic motion, Motion in a plane, Constrained Motion, Central orbits, Forces in three dimensions, Moments and products of inertia of rigid bodies, D'Alembert's principle.



Hydrodynamics: Kinematics of fluid motion, velocity potential, stream lines, Euler's equation of Motion, Fluid Motion in two dimensions: Complex potential, Sources, Sinks and Doublets and their image system with regard to a line and a circle.

Numerical Methods: Numerical techniques for roots of general equations, Interpolation, Numerical differentiation and integration, Numerical solution of first and second order ordinary differential equations, Matrix factorization and iterative methods for systems for linear equations, Estimation of eigenvalues and eigenvectors, Least square curve fitting.

PSYCHOLOGY (23)

- Section I : Basic Psychology process
- Section II : PSYCHOLOGICAL STATISTICS
- Section III : PSYCHOPATHOLOGY
- Section IV : PSYCHOLOGY AND SOCIAL PROCESSES
- Section V : DEVELOPMENT PSYCHOLOGY
- Section VI : PERSONALITY RESEARCH AND MEASUREMENT
- Section VII A : CLINICAL PSYCHOLOGY IN SCHOOL SETTING

OR

SECTION VII B : ORGANISATIONAL BEHAVIOUR

STATISTICS (24)

Probability Theory: Random experiments, Sample space, events, algebra of events, axiomatic definition of probability, probability spaces, relationship of axiomatic and classical probability, role of frequency ratios, properties of probability measure, subadditivity, Boole's inequality, probability of union of events, matching problem, repeated birthday problem, occupancy problem, statistics of physical particles, conditional probability and associated probability space, Bayes theorem, independence of events.

Random variables as functions, induced probability measure via inverse mapping, induced probability distribution, distribution functions, distribution functions and their properties, probability mass function (pmf) of discrete random variables, probability density function (pdf) of continuous random variables,

Random vector, marginal and conditional distributions, independence of random variables

Mathematical expectation, moments, factorial moments, moment generating function, probability generating function, Expectation of jointly distributed random variables, marginal and conditional expectation, correlation, Chebyshev's inequality, Markov's inequality, functions of random variables.



Bernoulli distribution, binomial distribution, Poisson distribution, derivation of Poisson distribution as a limiting case of binomial distribution, geometric distribution, negative binomial distribution, hypergeometric distribution, multinomial distribution, uniform distribution, normal distribution and its relationship with the binomial and Poisson distribution, Cauchy distribution, bivariate normal distribution and its marginal and conditional distributions.

Statistical Methods: Measures of central tendency, dispersion, moments, skewness and kurtosis. Simple linear regression, method of least squares, correlation coefficient, correlation ratio, intraclass correlation, rank correlation, fitting of some nonlinear curves. Multiple regression, multiple and partial correlation for three variables. Analysis of Categorical Data, consistency, independence and association of attributes, coefficient of contingency.

Statistical Inference: Random sample from a given pdf or pmf, Functions of random variables and their distributions Sufficiency, factorization theorem, consistency, Unbiasedness, Estimation method of maximum likelihood, method of moments. Statistical Tests of Hypothesis- Fundamental concepts including the power function, p values, Neyman and Pearson Lemma, most powerful (MP) and uniformly most powerful (UMP) tests, Applications of χ^2 , t, F and z distributions in tests of significance, Likelihood ratio test, Unbiased test, Neyman Pearson Lemma for randomized tests, Randomized test for binomial and Poisson distributions. Completeness and sufficiency, Rao-Blackwell theorem, Lehman Scheffe theorem, one parameter exponential family and its completeness, Cramer- Rao inequality, Best linear unbiased estimator.

Sampling Theory: Simple random sampling and Stratified sampling, Sample surveys versus complete enumeration, Non sampling errors, Simple random sampling with and without replacement, simple random sampling for attributes, Stratified random sampling, advantages of stratification, methods of allocation. Use of auxiliary information: Ratio, regression and product method of estimation, Systematic sampling, Cluster sampling with equal clusters.

Vital Statistics: Crude, death rates, infant mortality rates, standardized death rate, complete and abridge life table - construction and uses, mortality rate and probability of dying, use of survival tables. Measurement of fertility - crude birth rate, general fertility rate, total fertility rate, gross reproduction rate, net reproduction rate, population growth and logistic model for population projection.

Design of Experiments : One-way ANOVA, two-way ANOVA with single observation per cell and equal number of observations per cell. Randomization, Replication, Local Control,



Completely randomized design CRD), Randomized block design (RBD) , Latin square design (LSD), 22 and 23 factorial experiments.

Nonparametric Statistics : Order statistics, Distribution of maximum, minimum and r-th order statistic, Joint distribution of r-th and s-th order statistic, distribution of range, distribution free confidence intervals for quantiles and distribution free tolerance intervals, Sign test, Wilcoxon test, Median test, Run test.

Index number: Price relatives and quantity or volume relatives. Link and chain relatives, computation of index numbers, Laspeyre's, Paasche's, Marshal - Edgeworth's and Fisher's index numbers, chain base index number, consumer price-index numbers. Tests for index-numbers: Time and Factor reversal tests.

Time Series: Components of time series, additive and multiplicative models, methods of determination of trend, growth curves, analysis of seasonal component and seasonal indices.

Statistical Quality Control : Causes of variation in quality, control limits, charts for attributes, np chart, p-chart, c-chart, Charts for variables- X- and R charts.

M.Com. (MASTER OF COMMERCE) (25)

Statistics, Management, Company Law, Accountancy and Cost Accounting, Income Tax, Auditing, Indian Economy, Economics, Banking, Business Organization, Business Law, Insurance.

BIOCHEMISTRY (26)

General Chemistry: Properties of s, p, d, f block elements. Activity series. Acids, bases and buffers. Osmotic pressure. Thermodynamics. Colloidal state and membrane phenomenon. Solutions. Mechanisms of organic reactions. Properties of aliphatic and aromatic compounds. Stereochemistry. Concept of free radicals.

Bio-physical techniques: Basic Principles of Chromatography, electrophoresis, spectroscopy and their applications.

The Living system: Origin of life, Cell and cell organelles, General introduction to microbial and plant world, chordates and non-chordates. Environmental biology.

Biomolecules: Classification, Structure, and functions of Carbohydrates, Proteins, Lipids, Nucleic acids and Vitamins. Fundamental concepts of nutrition.

Enzymes: Classification, properties, kinetics and regulation of enzymes. Allosteric enzymes, isozymes and immobilization.

Genetics and Molecular Biology: Laws of inheritance, linkage, crossing over and chromosome mapping, Mutation, Cell cycle, Cell division. DNA as genetic material,



replication, transcription, translation and gene regulation. Genetic engineering. Use of virus and bacteria in gene cloning.

Metabolism and Clinical Biochemistry: Glycolysis, Krebs cycle, oxidative phosphorylation, gluconeogenesis, p-oxidation, transamination, urea cycle, in-bom errors and regulation of metabolism. Diagnostics markers of diabetes, lipid disorders, liver and kidney function. !

Human Physiology: Digestion, respiration, blood and immune system, excretion, reproductively physiology, muscle contraction, nerve transmission. Acid-base balance. Hormones.

Plant physiology: Photosynthesis, photorespiration, nitrogen fixation, senescence, plant harmones.

AGRICULTURE SCIENCE (27)

AGRICULTURAL BOTANY

Historical, symptomology, properties and nature of plant viruses, modes of transmission of plant viruses. General principle of control of viral diseases in plants. A knowledge of the common viral diseases of potato tobacco, Hibiscus, cucurbits, beans and banana. Historical, broad outlines of morphology, reproduction, nomenclature and classification of plant pathogenic bacteria. History of Mycology, Taxonomy and nomenclature of fungi. Origin and phylogeny of fungi. Different, systems of classification and their basis. Structure and life history of the chief representatives of fungi. History of plant pathology. Dissemination of diseases, modes of infection symptomology, physiology of parasitism, mechanism of disease resistance, fungicides and their action.

Cell structure and function, cell wall, nucleus, mitochondria, golgi apparatus, chloroplasts and other cell organelles, their structure and function. Cell division : mitosis and meiosis. Polyploidy: Nature and classification of Polyploidy. Heridity and environment, laws of heredity; Linkage, crossing over and mapping of chromosomes. The nature of gene and factors affecting mutation. History of plant breeding, its present status and scope. Mode of reproduction in crop plants. Heterosis and its application.

Regional soils of India in relation to crops and their production. Secondary effects on micro flora. Physical nature of soils and water relation of soils. Concept of water requirement of crops and the critical period of water requirement of plants and its significance in crop production.



Formation of usar soils and their measurement. Control of alkalinity and salinity. Physiology of flowering, photoperiodism, verbalization and their impact on crop production. Seed formation, longevity and multiplication. Physiology and biochemistry of herbicides. Physiology of propagation. Physiology of fertilization, fruit growth and ripening. Mineral nutrition, uptake and translocation of solutes. Mutually beneficial and toxic influences of plants. Physiological role of some major and minor elements such as N, R K, Ca, Mg, B, Mo, Mn, Zn.

A study of the botany of important weeds associated with the crop plants of U.P Methods of preventing introduction and spread of weeds. Principles and procedures of weed control Growth, inhibiting, and promoting chemicals and their composition. Soil microorganisms and their role in production. Principles, and practices of dry farming, special problems in dry farming mixed cropping and strip cropping in agriculture in India. Agronomic practices in relation to soil acidity and alkalinity.

Soil nitrogen losses and its restoration, Phosphorous deficiency and soil fertility. Fixation of nutrients in soil. Soil potassium in relation to soil fertility and plants growth and development. Plant production problems and methods. C/N ratio as a function of growth and development. The problems of non-irrigated soils. Tillage and its influence on plant growth. Horticulture- importance and present position. Origin, history, breeding and production technology of important fruits such as Mango, Banana. Citrus, Guava. Papaya, Grape. Pineapple, Litchi, Pomegranate, Ber, Apple, Pear and Walnut with special reference to climate, soil, propagation, cultivars, nutrition, irrigation and other orchard management practices. History of gardening of India. Styles of gardening, their principles and practices with special reference to Mughal, Japanese and English gardens. Frequency distribution, mean, median and mode. Standard deviation. Test of significance : t, F and chi-square tests. Experimental design basic principles, completely randomized. Randomized block, Latin square and Split-plot designs and their analysis.

AGRICULTURAL CHEMISTRY AND SOIL SCIENCE

Theory of acid and bases, pH and its determination, buffers, oxidation, reduction, catalytic reaction, colloids & their properties, Humus and clays.

Carbohydrates nomenclature, classification, proteins-classification, physical & chemical properties. Liquids classification and properties.



Soil texture & structure. Soil moisture & its movement. Soil chemistry : weathering of rocks & minerals, profile development. Soil forming processes, exchangeable properties of soil, organic matter-properties and its fractions. Reclamation of Soils. Quality of irrigation water. Soil fertility-macro & micro nutrients.

Manures & fertilizers-classification, mode of action & utilization. Uptake of nutrients. Pesticides & residual toxicity.

Enzymes classification & their mechanism of action.

Metabolism of carbohydrates, lipids & proteins.

N-fixation, Phytohormones & vitamins.

AGRICULTURAL ZOOLOGY & ENTOMOLOGY

1. General introduction to animal kingdom and various phyla with special reference to agricultural and economic importance. Agricultural importance of phytonematodes. snails, slugs, earthworms, crabs, birds, and mammals, their distribution, habit and life cycle.
2. Identification of poisonous snakes of India. Symptoms of snake bite and its antidotes. Life history and control of animal vectors of human diseases and important parasites of man animals.
3. Local fishes of economic importance, planning and implementation of fish farming, knowledge of crustacean and molluscan fisheries. Rat damage to crops and plantations. Methods of its control.
4. Classification of Phylum Arthropoda upto classes: general characters and examples. Position of insects in animal kingdom. Study of characters of insect orders of economic importance. Life history, rearing methods of some useful insects viz. honeybee, silk worm and lac insects.
5. Insect morphology integument and its structure, regions, sclerites. segmentation of head : Its appendages, structure and function : modification of antennae and mouth parts of insects. Study of insect thorax and its appendages including genitalia.
6. Anatomy of grasshopper, digestive, respiratory, excretory, circulatory, reproductive, nervous system and sense organs. Post embryonic development of insect, ecdysis, instars. metamorphosis, types of larvae and pupae. Pest management: principle of integrated Pest management, concept, and procedure. Physical, mechanical, chemical, biological, and legislative control of insects. Insecticide poisoning and its antidotes. Concept and importance of wild life conservation in relation to ecology and environment.



MASS COMMUNICATION (28)

1. General awareness including constitutional matters, current affairs, public debates on matter of polity, economy, science & technology. Awareness of International Development and their impact of Indian society.
2. Exposure to issue and debates covered by print media, television news channels and radio. General understanding of Indian Art, Culture, National movements and Cinema.

MASTER OF FINE ARTS (M.F.A.) (29)

Theory : (conducted by the University)

Syllabus: Aesthetics & Art Appreciation (Indian and Western)

History of Indian Art (Pre-history to Modern)

History of Western Art (Pre-history to Modern)

Folk, Tribal and current trends in Art Scenario.

Practical : (conducted by the Department)

For admission in M.F.A in Painting candidate has to appear in Practical Test of 100 marks. Life Drawing, **Time: 180 minutes of 100 marks** in charcoal/Pastel/ Water colour (The Practical test will be conducted by the Department . For Practical test half imperial size paper will be given. The candidates are advised to contact the Head, Visual Arts Department for Practical Test.)

Interview : 50 Marks (conducted by the Department)

M. P. A. (30)

(VOCAL)

1. Detailed study of the following Ragas:

Puriya, Marwa, Jai-Jaiwanti, Suddha Kalyan, Deshkar, Kamod, Chayanat, Todi, Multani, Miyan-Malhar, Gound-Malhar, Adana, Darbari Kanhada, Basant, Paraj, Puriya Dhanashri, Shri, Hindol, Suddha Sarang, Madhuwanti.

2. Taal

Rupak, Teerva, Dadra, Kaharwa, Trital, Jhaptal Ektal, Dharmar, Ada Chartal, Panoram Sawari, Gaj jhampa, Chartala, Sooltal, Deepchandi, Jhoomba, Tilwada.

3. Details introduction of all the Ragas and Taalas mentioned above.

4. Comparative study of the Samprakit Ragas and Taalas.

5. Study of Alpatva and Bahutva, Tirobhav and their use and importance.



6. Laya and layakari- Different types of Layakaries, Dugun, Tigun Chaugun and Ada.
7. Different styles of Gayaki - Dhruvapad, Dhamar, Tappa, Thumari and Chaiti.
8. Brief study of different Gharanas of Vocal Music.
9. Life sketch and contribution of Eminent Musicians and Vocalist.
10. Vibration and frequency, pitch and its relation with vibrator, Amplitude, (Swaymbhu Swear); Consonance and Dissonance, Main Types of chords, Absorption, echo, Reverberation and Resonance of sound, Placement of Sudha and Vikrit Swars on different shruties according to Lochan, Ahobal, Pundarik, Ramamatya, Somnath.
11. Notation system of Bhatkhande and Vishnudigambar, various types of intervals of notes. Different Musical scales, comparative study of Notation System of Bhatkhande and Western Music, placement of notes on „Veena’ according to Pt. Srinivas, Comparative study of Northern Sothern Talapaddhaties.
12. Biographies of Bhatkhande, Vishnudigambar, Tansen, Ustad Vilayat Khan, Ameer Khusroo, Pt. Ravi Shankar, Pt. Ram Sahai, Ahmad Jan Thirakwa, Nana Sahib Pansse.
13. History of Music and classification of ragas and Taals. History of Music of Ancient period up to 13th century. Short History of Music of Medieval and Modern periods. Comparison of Hindustani and Karnataka Music Systems. Gram, Moorchana its kind and their importance. Kind of Gamaka. Brief knowledge of Different Gharanas.

(INSTRUMENTAL SITAR)

1. Detailed study of the following Ragas:

Puriya, Marwa, Jai-Jaiwanti, Suddha Kalyan, Deshkar, Kamod, Chayanat, Todi, Multani, Miyan-Malhar, Gound-Malhar, Adana, Darbari Kanhada, Basant, Paraj, Puriya Dhanashri, Shri, Hindol, Suddha Sarang, Madhuwanti.

2. Taalas

Rupak, Teerva, Dadra, Kaharwa, Trital, Jhaptal Ektal, Dharmar, Ada Chartal, Pancham Sawari, Gaj jhampa, Chartala, Sooltal, Deepchandi, Jhoompa, Tilwada.

3. Details introduction of all the Ragas and Taalas mentioned above.
4. Comparative study of the Samprakit Ragas and Taalas.
5. Study of Alpatva and Bahutva, Tirobhav-Avirbhav and their use and importance.
6. Laya and layakari- Different types of Layakaries, Dugun, Tigun Chaugun and Ada.
7. Different styles and Baj - Maseetkhani, Razakhani, Firozkhani etc.
8. Brief study of different Gharanas of Sitar.
9. Life sketch and contribution of Eminent Musicians and Instrumentalists.



10. Vibration and frequency, pitch and its relation with vibrator, Amplitude, (Swaymbhu Swear); Consonance and Dissonance, Main Types of chords, Absorption, echo, Reverberation and Resonance of sound, Placement of Sudha and Vikrit Swars on different shruties according to Lochan, Ahobal, Pundarik, Ramamatya, Somnath.
11. Notation system of Bhatkhande and Vishnudigambar, various types of intervals of notes. Different Musical scales, comparative study of Notation System of Bhatkhande and Western Music, placement of notes on 'Veena' according to Pt. Srinivas, Comparative study of Northern Sothern Talapaddhaties.
12. Biographies of Bhatkhande, Vishnudigambar, Tansen, Ustad Vilayat Khan, Ameer Khusroo, Pt. Ravi Shankar, Pt. Nikhil Banerjee.
13. History of Music and classification of Ragas and Taals. History of Music of Ancient period up to 13th century. Short History of Music of Medieval and Modern periods. Comparison of Hindustani and Karnataka Music Systems. Gram, Moorchana its kind and their importance. Kind of Gamaka. Brief knowledge of Different Gharanas.

(INSTRUMENTAL TABLA)

1. **Detailed study of the following Taalas** : Trital, Jhaptal, Rupak, Teevra, Sooltal, Ektal, Chartal Basant, Pancham Swari, Gaj Jhampa, Dhamar, Laxmi, Rudra, Shikhar, Brahma, Kurnbha, ganesh, Matt, Dadra and Kaharwa, Jat Taal, Deepchandi Taal.
2. Kayada, Palta, Peshkar, Rela, 'Laggi-Ladi', Paran, different types of Chakkardar, Tihai, and paran, Tripalli, Choupalli, Nauhakka, Jhoolna ke Bol, Gat- Farad, Mukhda, Mohra.
3. Ten Varnas of Tabla.
4. Study of Sam Matrik and Samprakrit Taalas.
5. Different Gharanas of Tabla playing with their style and Baj.
6. Life sketch and contribution of Eminent Musicians and Musicologist.
7. Laya-Layakari, different kinds of Layakaries, Dugun, Tigun, Chaugun, Aad, Kuada, Biyad etc.
8. Life sketch and style of playing leading Tabla Artists, Padam Bhushan Pt. Samta Prasad, Padam Vibhushan Pt. Kishan Maharaj .
9. Vibration and frequency, pitch and its relation with vibrator, Amplitude, (Swaymbhu Swear); Consonance and Dissonance, Main Types of chords, Absorption, echo, Reverberation and Resonance of sound, Placement of Sudha and Vikrit Swars on different shruties according to Lochan, Ahobal, Pundarik, Ramamatya, Somnath.
10. Notation system of Bhatkhande and Vishnudigambar, various types of intervals of



notes. Different Musical scales, comparative study of Notation System of Bhatkhande and Western Music, placement of notes on 'Veena' according to Pt. Srinivas, Comparative study of Northern Sothern Talapaddhaties.

11. Biographies of Bhatkhande, Vishnudigambar, Tansen, Ameer Khusroo, Pt. Ram Sahai, Ahmad Jan Thirakwa, Nana Sahib Panse.
12. History of Music and classification of Ragas and Taals. History of Music of Ancient period up to 13th century. Short History of Music of Medieval and Modern periods. Comparison of Hindustani and Karnataka Music Systems. Gram, Moorchana its kind and their importance. Kinds of Yati. Brief knowledge of Different Gharanas.
13. Gharana of Tabla
 - Tabla Aur Pakhawaj Ka Tulnatmak Adhyayan.
 - Classification of Instruments.
 - Taal Ka Manovaigyanik Prabhav.

M.A. THEATRE & FILM (31)

No prescribed syllabus. Questions are based on general awareness about film and theatre.

MASTER IN DEVELOPMENT STUDIES (32)

The programme has a provision of the lateral entry after three years. Those students of the Centre's Integrated Programme who have obtained 6.0 CGPA in case of General and OBC category and 5.5 CGPA in case of SC and ST shall be automatically enrolled in the Master in Development Studies Programme. Remaining vacant seats shall be filled-in through the AU PGAT 2017.

Eligibility criteria for the remaining seats have been determined as follows: Minimum 50% marks or equivalent grade in High School and Higher Secondary/Intermediate and 55% or equivalent grade in Bachelor of Social Work / B.Com. / B.A. in Economics / B.Sc.(Ag.) / Bachelor in Development Studies/Globalization and Development Studies/Bachelor in Business Administration / Management / Bachelor degree in Rural Development/Bachelor of Planning from a recognized University and minimum 50% score in PGAT.

Syllabus :

- A. Theories & perspective of development and globalization
- B. International politics and relations
- C. Global economic order
- D. Corporate sector and Globalization



- E. Globalization and tribal & rural societies
- F. Science and Technology in Global era
- G. Mass Media & Information & Communication Technology (ICT), Sustainable development and Environmental issues
- H. Basic Computer Skills
- I. Idioms & phrases
- J. Foreign words

MATERIAL SCIENCE (33)

Eligibility : Candidate should be B. Sc. With Physics or Chemistry as one subject in III year. Provided he/she has Mathematics as one subject at least upto II year.

- Mathematical Functions, Simple Integration & Differentiation, Differential equations, Curve of simple functions, Scalar and Vector products. Vector Differentiation, Gradient, Divergence and Curl. Vector integration. Theorems of Gauss. Stoke's and problems based on these.
- Thermodynamics, Kinetic Theory, of Gases, Conduction of Heat and Radiation.
- Motion under central forces, Mechanics of nonrigid bodies, Elastic properties, Fluid Mechanics.
- Electrical Circuits: AC, DC and transient behavior.
- Semiconductor Electronics including photonics and digital electronics.
- One dimensional motion in non dispersive media, Ultrasonics.
- Electrostatics in free space and in dielectric media, Electric Current, Magnetostatics, Time varying fields, Electromagnetic waves in free waves, Physical optics.
- Atomic Physics, X-ray, Vibration and Rotational spectroscopies, UV-visible spectroscopies, NMR
- Need of quantum mechanics, observables and operators, Schrodinger equation and its simple applications upto hydrogen like atoms.
- Crystal Structure, Reciprocal Lattice, Interatomic forces and classification of solids, Free electron theory and band gap of solids, Electrical and Magnetic properties of Materials.
- Chemical Bonding, Valence bond theory, Molecular orbital theory.
- Properties of s and p blocks. Transition and inner transition elements.
- Coordination compounds, Complex Formation.



- Fundamentals of Organic Chemistry, Stereo Chemistry of Carbon Compounds, Isomerism, reaction mechanisms, Chemistry of Fundamental groups.
- Chemical Kinetics : Zero, First, Second and Third order reactions, Chemical Equilibria.
- Electrochemistry, reversible electrodes, Electrode reactions, Nernst Equation, Determination of Cell E.M.F., Concentration Cells, Acid-Base Concepts.
- Photochemistry : Lambert-Beer law, Jablonski Diagram.

M. TECH. IN EARTH SYSTEM SCIENCES (ESS) (34)

Statistical Distributions, Probability, Curve fitting, Correlation, Regression, Mean, Variance, Analysis of variance, Significance tests, Fundamentals of computers and programming, Knowledge of different operating systems, Numerical Methods, Ordinary and Partial Differential Equations, Basics of Atmosphere and Ocean, Weather and Climate, Composition and structure of atmosphere, Thermodynamics of the atmosphere, Laws of thermodynamics, Heat budget, Properties of seawater, Temperature, Salinity, Density, Conductivity, Indian Monsoon, Ecological Principles, Molecules and their interaction relevant to Biology.

BIOINFORMATICS (35)

Eligibility Criterion:

The Course for M.Sc. in Bioinformatics will be open those student who have passed the B.Sc. Examination of this University or any other University recognized by this University with the following combinations with 55% of the marks.

- (a) Zoology, Botany, Chemistry
- (b) Zoology, Chemistry, Biochemistry
- (c) Botany, Chemistry, Biochemistry
- (d) Mathematics, Physics, Chemistry
- (e) Mathematics, Physics, Computer Science
- (f) Mathematics, Physics, Statistics

Those who have passed B.Sc. with Molecular Biology, Cell Biology, Microbiology, Biotechnology, Biophysics, Biochemistry, Structural Biology, as one of the subjects can also apply.

Syllabus for Admission Test: The syllabus for the admission test will be of graduation level



for above mentioned subjects/combinations.

M.Sc. IN ENVIRONMENTAL SCIENCES (36)

Earth Sciences: Structure and composition of Environment- Atmosphere, Hydrosphere and Lithosphere, Earth Processes, Hydrological cycle and Global water balance, Types of Rocks and Weathering of Rocks, Soil formation and Soil profile, Soil erosion & Conservation of soil, Mineral and Power Resources in India, Biogeochemical Cycles, Metrology, Natural Disasters, Major man-induced disaster: Bhopal and Chernobyl Disaster.

Physical and Chemical Sciences: Mechanics, Gravitational force, Thermodynamics, Quantum physics, Electrostatics, Nuclear physics, Optics, Electromagnetic waves, Sound.

Inorganic chemistry- Atomic structure, Periodic table, s, p, d and f block elements, Chemical bond, Chemical Kinetics, Acids and Bases, Oxidation and Reduction, Coordination chemistry. Organic chemistry-isomerism, Nomenclature, Name reactions, Mechanism of organic reactions, Hybridization, Chemical bonding, Aromatic compounds. Buffering capacity, Essential and trace elements in living systems. Toxicity of Heavy metals

Biological sciences: Plant and Animal kingdom-classification, Characteristics of various groups, Morphology, Anatomy, Adaptations, Cell biology, Molecular biology, Structure and functions of biomolecules, Genetics, Microbiology, Biotechnology, Photosynthesis, Respiration, Nitrogen metabolism, Protein synthesis, Growth hormones, Enzymes, Structural and functional aspects of Digestive, Respiratory, Circulatory, Muscular, Excretory, Reproductive, Endocrine and Nervous system of animals, Economic botany and Plant diseases

Ecology and Environment Biosphere, Organizational levels of biosphere, Ecosystem: Structure and Types, Food Chain and Energy Flow, Population and Community Ecology, Biodiversity and its Conservation.

Mathematics and Statistics- Matrix, logarithms, Differential and Integral Calculus, Trigonometry, Sequence and Series, Probability. Mean, Mode and Median, Standard deviation, Correlation, Regression.

Environmental Studies: Natural resources- Water, Soil, Food, Energy, Forests, Minerals, Environmental Pollution, Global environmental problems, Social issues related to environment.

TEXTILE AND APPAREL DESIGN (37)

Design- Types of Design, Principles of Design, Element of Design-Line texture, Colour.

Fashion- Fashion cycle, theories of fashion.

Teaching in pattern making- Drafting, draping, pattern.



Fitting- Associated problems

History & scope of Apparel Design in India.

Terminology of fabric cutting & sewing

Drafting's of - frock, Romper, Women's garments, Men's garments.

Properties of textile fibers.

Textile chemistry- Natural fibers, man made fibers, yarn construction, Fabric finishes, Dyes types.

Traditional textile of India - Chikankari, Zardosi, Kanthas of Bengal, Kashmiri kasheeda, Muslins of Dhaka, Amru and Himru of Hyderabad, Baluchari, kanchi varams, chanderi's , phulkari, patola.

Removal of stain - Cotton, Silk, and synthetic fabric soap manufacturing.

Laundry & dry cleaning - Soap making, types of bleaches.

Printing methods- Resist, block, and Screen printing.

MASTER OF PHYSICAL EDUCATION (M.P.Ed.) (38)

1. Introduction, Foundation and Management of Physical Education

- 1.1 Aims and objectives of Education and Physical Education and Contribution of Physical Education.
- 1.2 Biological, Psychological and Sociological Principles and their Application in Physical Education.
- 1.3 Different Schools of Philosophy and their relevance to Physical Education.
- 1.4 Meaning, Phases, Nature and Importance of Management.
- 1.5 Location, Preparation, Layout and Maintenance of Play Fields Construction, care and Maintenance of Gymnasium and Swimming Pool.
- 1.6 Equipments in Physical Education Criteria of selection, procedure of purchase, care and maintenance of equipments.
- 1.7 Intramural and Extramural Programmes.
- 1.8 Budget for Physical Education- Budget making and accounting.

2. Health Education

- 2.1 Definition of Health and Description of its components.
- 2.2 Definition, Scope and Principles of Health Education.
- 2.3 Health Problems in India.
- 2.4 School Health Programme
- 2.5 Nutrition, Assessment of Nutrition, Classification of Food, Balance Diet.

3. Anatomy, Physiology and Physiology of Exercise

- 3.1 Essential properties of Living Matter.
- 3.2 Cell, Tissues, Organs and Systems- Structure and Function



- 3.3 Study of following systems and processes with a view to understand the effect of exercise on Different systems of the Body.
 - 3.3.1 Cardio- Vascular System
 - 3.3.2 Respiratory System
 - 3.3.3 Nervous System
 - 3.3.4 Metabolism and Temperature Regulation
 - 3.3.5 Sensory System
- 4. Educational Methods and Educational Technology**
 - 4.1 Teaching Technique in Education
 - 4.2 Principles of Teaching, Commands and Class Management
 - 4.3 Lesson Planning- Physical Education and Coaching Lessons
 - 4.4 Tournaments- Knockout, League, Combination and Challenge types.
 - 4.5 Audio- Visual aids- values, criteria for selection and suggestion for use.
 - 4.6 Presentation Techniques in Physical Education.
 - 4.7 Micro Teaching, Simulation Teaching.
 - 4.8 Definition of Components of an Instruction System, Advantages of System approach.
- 5. Educational Psychology**
 - 5.1 Growth and Development, types of learning, principles of learning, Learning use.
 - 5.2 Factors of learning and theories of learning.
 - 5.3 Individual Differences
 - 5.4 Personality (Meaning & Memory)
 - 5.5 Memory & Types of Memory.
- 6. Kinesiology and Corrective Physical Education**
 - 6.1 Types of Joints & Muscles.
 - 6.2 Major Terminologies of Fundamental Movements.
 - 6.3 Location and Action of Major Muscles.
 - 6.4 Motor Unit and all & Non- Law.
 - 6.5 Reciprocal Innervation.
 - 6.6 Equilibrium and Friction.
 - 6.7 Prevention of Injuries.
 - 6.8 Massage
 - 6.9 Postural Deformities
 - 6.10 Therapeutic Exercises
 - 6.11 Rehabilitation of Sport Injuries.
- 7. Test & Measurements**



- 7.1 Test, Measurements, Evaluation, Statistics, Their Meaning
- 7.2 Measures of Central Tendency, Measures of Variability.
- 7.3 Percentile and correlation
- 7.4 Criteria of Test Selection
- 7.5 Motor Fitness tests, Skill Tests of different Games & Sports
- 8. Sports Training**
 - 8.1 Meaning, Definition and Principles of Sports Training
 - 8.2 Definitions, types and factors of training load.
 - 8.3 Meaning and Classification of speed, strength and endurance.
 - 8.4 Training method of speed, strength and endurance.
 - 8.5 Definition and method of teaching training.
 - 8.6 Meaning, types & importance of periodization.
9. General Knowledge/ Awareness with special reference to Major Games/Sports (AIU/ IOC listed); Reasoning etc.

M.Sc. (APPLIED GEOLOGY) (39)

(Candidate has to attempt any two papers from following 03 papers and merit will be based on sum of marks obtained in attempted 02 papers)

MATHEMATICS

Elementary Symbolic Logic : Sets-Algebra, cartesian product, Relation, Functions, Injective and Surjective MAPS; Inverse Functions.

Number System : Natural numbers, Integers, Integer modulo-N division algorithm, Euclidean Algorithm, Prime factorization.

Real-Number System : Complex Numbers, Real Sequence, Convergence of Infinite Series, Limit and Continuity of Functions of one Variable, Properties of continuous function in closed intervals. Differentiability and its application.

Differential Equations : Differential equations of first order, Linear differential equations with constant coefficients.

Functions of Several Variables : Limits, Continuity, Partial Derivatives, Differentiability, Gradient, Divergence, Curl, Line Surface and Volume Integrals.

Linear Algebra : Vector Spaces, Bases and Dimensions, Rank of Linear Transformations, Matrices, Matrix Representation of Linear Maps, Determinants, Rank of Matrices, Eigenvalues, Eigenvector, Cayley-Hamilton theorem, Diagonalisation of Matrices with distinct eigen values. Sequences and series of functions of a real variable, uniform convergence Riemann-integral of a Bounded function, convergence of Improper Integrals.



Statistics & Probability : Basic concepts and Bayes theorem.

PHYSICS

Mechanics and Elementary Relativity theory : Motion of systems of particles, Linear and angular momentum, Rotational Motion, Moment of inertia.

Non-rigid bodies : Stress and strain, Elastic moduli, Generalised Hook's law.

Fluid Mechanics : Ideal and viscous fluids, Equation of continuity, Rotational and Irrotational flows, Bernoulli's Theorem, Poiseuille's Equation, Stoke's Law.

Special theory of Relativity : Gallilean Transformation, Postulates of Special Theory, Lorentz transformation, Relativistic Dynamics.

Thermal Physics : Zeroth law of Thermodynamics, Concept of temperature, First law of Thermodynamics, Simple Applications, Reversible and Irreversible Processes, Second law of thermodynamics, Carnot's cycle, Entropy, Temperature Entropy Equation, Thermodynamic potentials, Joule-Thomson effect, Kinetic theory of gases, Conduction and Radiation of heat.

Optics : Corpuscular and Wave Theory of Light, Interference, Diffraction, Fresnel's Theory, Fraunhofer's Diffraction, Resolving Power of Prism, Polarization, double Refraction, Production and Detection of elliptically and circularly polarized Light, Basic Ideas of stimulated Emission, Lasers.

Wave-Motion, Electrostatics, Magneto statics : Oscillations-Simple Harmonic and Damped Oscillations, Forced Oscillations, Wave Motion in Non-Dispersive media, Wave Equation, Progressive Wave Solution, Acoustic Impedance, Energy Density, reflection and Transmission of Plane Waves, Coulomb's Law, Gauss's Law, Electric Dipole, Dielectrics, Ampere's Law, Biot-Severt's Law, Vector potential, Divergence and Curl of B, Magnetic Material and Magnetization, Time Varying Fields, Displacement Current, Curl of H, Faraday's Law, Self and mutual inductance, Electromagnetic waves in free space, Maxwell's Equations.

Atomic & Nuclear Physics : Bohr-Sommerfield model, Characteristics of Continuous X-Rays, Space quantisation, Bohr Magneton, Larmor Precession, Diamagnetism, Paramagnetism, Ferromagnetism and Antiferromagnetism. Quantum Concept : Photoelectric effect, Compton effect, deBroglie waves, Heisenberg's uncertainty principle, One-Dimensional Schrodiner's wave equation. Nuclear Physics : Natural Radioactivity, Fission and fusion, Liquid Drop Model.

Electrical Circuits and Basic Semiconductor Electronics : Circuit parameters, Kirchhoffs laws, Norton's and Thevenin's theorems, Charging and discharging of condenser, Growth and decay of current in R-L circuits, Balance and sensitivity conditions for A-C bridge,



Semiconductor materials, Diodes and Transistor, Measuring instruments, multimeters and CRO, Digital Electronics.

GEOLOGY

The Planet Earth: Origin of the solar system and the Earth; Geosphere and the composition of the earth; Shape and size of the earth; Earth -moon system; Formation of continents and oceans; Dating rocks and age of earth; Energy in the earth systems; Volcanism and volcanic landforms; Interior of earth; Earthquakes; Earth's magnetism and gravity, Isostasy; Elements of Plate tectonics; Orogenic cycles.

Geomorphology: Weathering and erosion; transportation and deposition due to wind, ice, river, sea, and resulting landforms, Structurally controlled landforms.

Structural Geology: Concept of stratum; contour; Outcrop patterns; Maps and cross Sections; Dip and Strike; Classification and origin of folds, faults, joints, foliation and lineation, unconformities; Shear zones.

Palaeontology: Major steps in the evolution of life forms; Fossils; their modes of preservation and utility; Morphological characters, major evolutionary trends and ages of important groups of animals-Brachiopoda, Mollusca, Trilobita, Echinodermata; Gondwana plant fossils; Elementary idea of vertebrate fossils in India.

Stratigraphy: Principles of stratigraphy; Litho-, chrono- and biostratigraphic classification; distribution and classification of the stratigraphic horizons of India from Achaean to Recent.

Mineralogy: Symmetry and forms in common crystals classes; Physical properties of minerals; Isomorphism and Polymorphism, Classification of minerals; Structure of silicates; Mineralogy of common rock-forming minerals; Modes of occurrence of minerals in rocks. Transmitted polarized light microscopy and optical properties of uniaxial and biaxial minerals.

Petrology: definition and classification of rocks; igneous rocks-forms of igneous bodies; Crystallization of magma; classification, association and genesis of igneous rocks; sedimentary rocks-classification, texture and structure; size and shape of sedimentary bodies. Metamorphic rocks-classification, facies, texture and properties.

Economic Geology: Properties of common economic minerals; General properties of formation of mineral deposits; physical character; Mode of occurrence and distribution in India both of metallic and non-metallic deposits; Coal and petroleum Occurrences in India.

Applied Geology : Ground water Hydrology; Mineral exploration, elements of Mining Geology and Environment Geology; Principles of Engineering Geology.



M. Sc. Design and Innovation in Rural Technology (40)

Unit-1

A general introduction to Fungi including importance and reproduction Bacteria, Plant viruses: Introduction and their economic importance. An elementary knowledge of soil, water, sewage, milk, food and air bacteria. Introduction of industrial microbiology.

Algae: a general introduction with their importance.

Unit-II

A brief account of Bentham & Hooker system of classification, General introduction of following families with their economic importance:

Poaceae, Leguminosae, Orchidaceae, Brassicaceae, Moraceae, Cucurbitaceae, Asteraceae, Solanaceae, Rubiaceae, Apiaceae, Liliaceae etc.

Different types of fruit with reference to their marketing. Broad outline of morphology & anatomy of vegetative and reproductive organs of angiosperms, cell wall structure, tissue and tissue systems.

Growth and growth hormones, Photosynthesis and Respiration, Nitrogen assimilation and fixation. Climate, weather and different plant communities including hydrophytes, mesophytes, xerophytes, mangroves, epiphytes and parasites

Unit-III

Concept and scope of genetic engineering, role of enzymes. GM crops and their importance Different plant diseases and their management. Integrated pest management (IPM), major human diseases caused by bacteria and fungi. Tissue culture and their applications.

A general introduction of horticulture, floriculture, apiculture and sericulture.

An introduction to Bee-keeping, pearl culture and tasar culture.

Unit-IV

Different models of rural development, Sustainable development, Different schemes of central government. Agriculture and economic development, Agro-forestry.

Concept of society, Adult & Non-formal Education, Sanitation programme and implementation, Government Health insurance schemes, bank insurance, smart card for BPL families.

Kharif, Rabi and Zaid Crops. Factors affecting the cultivation and production of crops.

Unit-V

Civil Society and NGO Management, NGOs as Society, NGOs as non-profit company, NGOs as Trust.

Entrepreneurship, Movement in India, role of entrepreneurship in economic development, need for rural entrepreneurship.

Computer hardware and software, operating system, GIS, Remote sensing.



Land resources: Land as a resource. Dry land, land use classification, and degradation.

Women's Studies (41)

Women's Studies is a multidisciplinary subject. Multiple choice questions will be set from all areas of Women's Studies including the History of Women's Studies in India as well as in the West as well as current advancements in Women's Studies. Important institutions related to Women's Studies and Women's Empowerment, International as well as Indian legislation related to Women eg: Prevention of Sati, Domestic Violence, Sexual Harassment, Triple Talaq etc., the role of MHRD and UGC in the development of Women's Studies. Questions will also be set on the Feminist Movement in India as well as in the West, the three waves of Western Feminism, various kinds of Feminism, Eco Feminism. The candidate must have a knowledge of issues and people related to Women's Empowerment and Welfare in India, the Women's Movement in India both before and after Independence, India National Policies and Agencies concerning Women's Development, eg. *Sva Shakti*, *Swayam Siddha*, STEP, NCW, Ministry of Women and Child Development etc. Questions will also be asked on the efforts made by the United Nations at the International level eg., CEDAW, International Women's Day, Women's Conferences from Mexico to Beijing. In addition to all this the candidate must have a knowledge of Women and Development, Gender and Development, Women and Literature, Women and Cinema, Women and Science, Women and Sports, LGBT, Women's Associations like WIA, NCWA, AIWC, important women from all fields at the international and National level, Feminist Research and Feminist Research Methodology.

M.C.A. (42)

Same Syllabus of M.Sc. Computer Science.