PROSPECTUS
(2022 – 2023)

For Admissions to Undergraduate, Masters' & Ph.D. Programmes

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APPLICATION FORM AND PROSPECTUS FOR ENTRANCE EXAMINATION 2022-2023

Note: **(i)** For Undergraduate programmes Bonafide Residents of Uttarakhand are eligible for sanctioned as well as payment seats whereas other state candidates are eligible for payment seats only (See Chapter –II (5).

(ii) For Masters'programmes Bonafide Residents of Uttarakhand only are eligible.

(ii) For M.Tech. programmes (except Agricultural Engineering programmes) over and above the sanctioned seats, 30 percent of sanctioned seats are allotted to Other State candidates. Applications will be filled up by the applicants but admissions will be made on the basis of their GATE qualified scores and/or B.Tech. marks (if seats remain vacant and no GATE qualified applicants are available).

(iii) Other State candidates may also get admission to Undergraduate programmes (except B.V.Sc.) and Masters programmes (Except M.Sc. Ag. (Agricultural Biotechnology) through the Entrance Examination conducted by Indian Council of Agricultural Research (ICAR). The admission of Other State candidates to B.V.Sc. shall be done through National Eligibility cum Entrance Test (NEET) by Veterinary Council of India (VCI). Admissions to DBT supported Master's programme (M.Sc. Agricultural Biotechnology) shall be made through online counseling from the list of qualified candidates received from DBT Regional Centre for Biotechnology, Faridabad, which is responsible for conducting Graduate Aptitude Test-Biotechnology (GAT-B) for admission to the above said programmes through out the country.

In Ph.D. programmes (except Ph.D. in Management) over and above the sanctioned seats, 25 percent of sanctioned seats shall be filled from the other State candidates through the Entrance Examination conducted by the University. In case, domicile candidates of Uttarakhand are not available for the sanctioned seats, the same shall be filled from amongst candidates of Other States and Vice-Versa.

(iv) No Entrance Examination is conducted by the University for Admissions to B.Tech. Programmes (except B.Tech. Food Tech.). The seats for other B.Tech. programmes are filled up through Joint Entrance Examination (JEE) conducted by (National Testing Agency (NTA)) and counseling conducted by Uttarakhand Technical University.

1. **Application Procedure**

(i) Only ONLINE application form procedure is available. To submit application form candidates should log on to the website: **www.gbpuat.ac.in** of the University.

(ii) **The candidates appearing in the qualifying examination may also apply provided they upload scanned copy of their marks-sheet at the time of online counselling failing which their candidature will not be considered for online counselling or seat allotment**.

2. Online filling of Application form

(a) Online filing of application form for UG, Masters, MCA and Ph.D. Programmes **:** 18.04.2022 to 31.05.2022

(b) Online filing of application form for M.Tech. Programmes and Sponsored candidates for Masters', M.Tech. and Ph.D. programmes (GBPUAT employees and Development Departments of State Govt. are eligible). **:** 18.04.2022 to 31.05.2022

3. Application fee Details

	Amount (Rs.)
For General/OBC	Rs. 1200.00
For SC/ST/PH	Rs. 600.00

Note: No hard copy of the application form is needed. However, the candidates are advised to get the filled in application form printed and keep it with them to produce at the time of document verification (if applicable).

IMPORTANT INSTRUCTIONS FOR CANDIDATES

1. The application form must be filled up in all respects. Incomplete application is liable to be rejected.
2. Candidates are advised to keep all required documents (e.g. Domicile Certificate, Category/Sub-category certificate, Rural Weightage of Uttarakhand (Certificate No. 6)/Sports Weightage (Certificate No. 8)/Agriculturalist Weightage (Certificate No. 9)/NCC Weightage certificate whichever is applicable) ready to produce at the time of document verification.
3. If a candidate provides any wrong information in the application form, his/her application shall be summarily rejected. If any candidate secures admission in the University by providing wrong information his/her admission shall be cancelled on detection of the facts at the cost and risk of the candidate.
4. If a candidate who is not eligible to appear in the entrance examination does so, he/she will not have any claim whatsoever for admission and the application/examination fee deposited by him/her shall not be returned.
5. All admissions shall be provisional in the first instance and the Vice-Chancellor of the University reserves the right to cancel the admission granted to a candidate without assigning any reason.
6. Ph.D. candidates must mention the Code of the Ph.D. programme to which the admission is being sought in the prescribed column, failing which any programme could be allotted to him/her according to the eligibility and he/she will have no claim for changing the programme subsequently.
7. The candidates are advised in their own interest to fill online application form and to preserve its print out to produce at the time of document verification (if they are allotted some seat)
8. The candidate should fully ensure before filling online application form that they fulfill the eligibility requirements for admission to the programme for which they are applying. The application fee once paid shall not be refunded in the event of rejection of the application. Only eligible candidates will be considered for admission.
9. It may be carefully noted that the candidate who has been punished at any time in his/her earlier academic career for having taken part in the activities of indiscipline or use of unfair means in any of the examination shall not be eligible for admission. In case, he/she secures admission by concealing any of the facts on these points or through oversight or clerical error on the part of the office of Controller of Examination, the admission is liable to be cancelled as and when it is detected.
10. The records of the Entrance Examination shall be preserved only for a period of six months.
11. In all matters relating to admission, decision of the Admission Committee of the University shall be final.
12. A candidate found using unfair means in the Entrance Examination will invite cancellation of his/her result, non-refund of examination fee and punishment as may be deemed proper by the Admissions Committee of the University.
13. University has all the rights to change the centre of examination.
14. The candidate shall have to deposit the total amount of fee prescribed by the University before issuing the I.D. number.
15. The candidate shall have to complete the registration formalities within one week of the commencement of registration process. Late reporting will not be accepted for admission in any circumstances.
16. In no circumstances candidate admitted in Ist year of various degree programmes will be permitted for registration after the appointed date of registration.
17. The second counselling shall be held after one week of the date of the first round of registration. Information pertaining to the second counselling will be uploaded on the University

website. Candidates are advised to see the website regularly. Third counselling, if needed will be held subject to vacant seats after second counselling. No individual intimation will be given to any candidate for any round of counseling.

18. The candidate admitted after the Third counselling, (if needed) shall complete their registration formalities by the last date of the registration decided by the University.
19. The seats remained vacant in the first semester in Ph.D. programmes only shall be filled in the II semester 2022-2023.
20. There shall be verification of the fingerprints of the admitting candidates.
    (i) The thumb impression of the left hand in application form.
    (ii) At the time of Entrance Examination.
    (iii) At the time of the counselling.
21. The candidates will not be allowed to carry question booklets along with them after the examination.
22. No question booklet and Answer key will be supplied to the candidates.

अभ्यर्थियों के लिए महत्वपूर्ण निर्देश

1. अभ्यर्थी इस विवरण पत्रिका में दिये गये निर्देश सावधानी पूर्वक पढ़ें। आवेदन–पत्र सब प्रकार से पूर्ण होना चाहिए। अपूर्ण अथवा त्रुटिपूर्ण आवेदन–पत्र निरस्त किया जा सकता है।
2. अभ्यर्थियों को सलाह दी जाती है कि अभिलेख सत्यापन के समय वांछित अभिलेखों (जैसे स्थायी निवास प्रमाण पत्र, जाति/उपजाति प्रमाण पत्र, ग्रामीण क्षेत्र अधिमान (प्रमाण पत्र संख्या 06)/खेलकूद अधिमान (प्रमाण पत्र संख्या 08)/कृषक अधिमान (प्रमाण पत्र संख्या 09)/एन.सी.सी. प्रमाण पत्र, जो भी लागू हो, को अपने पास तैयार रखें।
3. यदि कोई अभ्यर्थी अपने आवेदन–पत्र में गलत सूचना देता है तो उसका आवेदन–पत्र निरस्त कर दिया जायेगा और यदि कोई अभ्यर्थी गलत सूचना के आधार पर प्रवेश पा जाता है तो पता लगने पर उसका प्रवेश निरस्त कर दिया जायेगा जिसके लिए वह स्वयं उत्तरदायी होगा।
4. यदि कोई अभ्यर्थी प्रवेश परीक्षा के लिए अर्ह नहीं है परन्तु फिर भी वह प्रवेश परीक्षा में सम्मिलित होता है तो उसका प्रवेश हेतु कोई दावा मान्य नही होगा तथा उनके द्वारा जमा किया गया आवेदन शुल्क वापस नहीं किया जायेगा।
5. प्रथम चरण में सभी प्रवेश तदर्थ होते हैं और विश्वविद्यालय के कुलपति को यह अधिकार है कि वह किसी भी अभ्यर्थी का प्रवेश बिना कारण बताये निरस्त कर सकते हैं।
6. पीएच.डी. पाठ्यक्रम हेतु आवेदन–पत्र के निर्धारित खाने में पाठ्यक्रम का कोड लिखना अनिवार्य है अन्यथा शैक्षिक योग्यता के अनुसार किसी भी पाठ्यक्रम का प्रश्न पत्र आवंटित किया जा सकता है जोकि बाद में बदला नहीं जा सकता।
7. अभ्यर्थियों को उनके अपने हित में सलाह दी जाती है कि वे आनॅलाइन आवेदन पत्र को भरने के उपरान्त उसकी हाईकापी अभिलेख सत्यापन के समय प्रस्तुत करने हेतु अपने पास सुरक्षित रखें।
8. आनलाइन आवदेन–पत्र भरने से पूर्व अभ्यर्थी सम्बन्धित पाठ्यक्रम में प्रवेश हेतु आवश्यक न्यूनतम शैक्षिक योग्यता सुनिश्चित कर लें क्योंकि एक बार आवेदन–पत्र निरस्त होने की दशा में जमा किया गया आवेदन शुल्क वापस नहीं होगा। केवल अर्ह योग्यता वाले अभ्यर्थियों के प्रवेश दिये जाने पर ही विचार किया जायेगा।
9. कोई भी अभ्यर्थी जो अपने पूर्व अध्ययन काल में छात्र के रूप में किसी भी प्रकार की अनुशासनहीनता अथवा परीक्षा में अनुचित साधनों का प्रयोग करते हुए संस्थाओं से दंडित हुआ है तो वह प्रवेश के योग्य नहीं है। यदि कोई अभ्यर्थी उक्त तथ्यों को छिपाकर या परीक्षा नियन्त्रक कार्यालय की त्रुटि से प्रवेश पा जाता है तो पता लगने पर उसका प्रवेश निरस्त कर दिया जायेगा।
10. प्रवेश परीक्षा संबंधी अभिलेख परीक्षा नियन्त्रक कार्यालय में केवल छः महीने के लिए ही सुरक्षित रखे जायेंगे।
11. प्रवेश सम्बन्धी समस्त मामलों में अन्तिम निर्णय का अधिकार विश्वविद्यालय प्रवेश समिति को ही है।

12. प्रवेश परीक्षा में अभ्यर्थी को अनुचित साधनों का प्रयोग का दोषी पाये जाने पर अभ्यर्थी का परीक्षाफल निरस्त कर दिया जायेगा और परीक्षा शुल्क भी नहीं लौटाया जायेगा। इसके अतिरिक्त विश्वविद्यालय की प्रवेश समिति को अपने विवेकानुसार अभ्यर्थी को कोई अन्य दण्ड देने का भी अधिकार होगा।
13. परीक्षा केन्द्र को बदलने के सभी अधिकार विश्वविद्यालय के होगें।
14. अभ्यर्थी को विश्वविद्यालय का षठमास का पूरा शिक्षण शुल्क नामांकन संख्या प्राप्त करने से पूर्व जमा करना होगा।
15. अभ्यर्थी को पंजीकरण के तिथि से एक सप्ताह के अन्दर सभी पंजीकरण की प्रक्रियायें पूर्ण करनी होगी। किसी भी स्थिति में देरे से आने वाले अभ्यर्थी को पंजीकरण की अनुमति नहीं दी जायेगी।
16. विभिन्न डिग्री पाठ्यक्रमों के प्रथम वर्ष में प्रवेश पाने वाले अभ्यर्थियों का पंजीकरण किसी भी परिस्थित में उनके अभिलेखों की जांच हेतु दी गयी अन्तिम तिथि के बाद अनुमन्य नहीं होगा।
17. प्रथम पंजीकरण के उपरान्त रिक्त सीटों के लिये द्वितीय काउन्सिलिंग प्रथम काउन्सिलिंग की तिथि से एक सप्ताह के बाद प्रारम्भ की जायेगी। जिसकी सूचना विश्वविद्यालय वेबसाइट पर डाल दी जायेगी। अभ्यर्थियों से अनुरोध है कि उक्त सूचना के लिये विश्वविद्यालय वेबसाइट को निरन्तर अवलोकन करें। द्वितीय काउन्सिलिंग के बाद रिक्त सीट रहने पर आवश्यकतानुसार तृतीय काउन्सिलिंग करायी जायेगी। काउन्सिलिंग के किसी चक्र के लिये व्यक्तिगत रूप से कोई सूचना नहीं दी जायेगी।
18. जिन अभ्यर्थियों का प्रवेश तृतीय काउन्सिलिंग (यदि आवश्यक हो) के तहत होगा वे अपनी पंजीकरण प्रक्रिया विश्वविद्यालय द्वारा निर्धारित पंजीकरण की अन्तिम तिथि तक पूर्ण करेंगें।
19. परास्नातकोत्तर पाठ्यक्रम के लिये प्रथम काउन्सिलिंग के उपरान्त रिक्त सीटों की प्रवेश प्रक्रिया द्वितीय षठमास 2022–2023 में की जायेगी।
20. प्रवेशार्थियों द्वारा सत्यापन हेतु अंगूठे के निशान निम्न प्रकार लिये जायेगें।
    (1) आवेदन पत्र में बाये हाथ के अगूंठे का निशान।
    (2) प्रवेश परीक्षा देते समय।
    (3) काउन्सिलिंग के समय।
21. परीक्षा के उपरान्त अभ्यर्थियों को प्रश्न पत्र पुस्तिका अपने साथ ले जाने की अनुमति नहीं होगी।
22. प्रश्न पत्र पुस्तिका एवं उत्तर कुंजी की प्रति किसी भी अभ्यर्थी को उपलब्ध नहीं कराई जायेगी।

INSTRUCTIONS TO CANDIDATES FOR FILLING OF ONLINE APPLICATION

- It is mandatory for each candidate to provide a valid mobile number in the application form. The Registration number, password and any other important communication regarding written examination/counseling (if needed individually) will be sent on the same registered mobile number of the candidate only. The candidates are requested to check regularly their messages on the registered mobile number for any communication from G.B. Pant University of Agriculture and Technology, Pantnagar. The candidates should not disclose password to any other candidate/person.
- **Please note that the Admit Card for written test will not be sent by post. Admit card has to be downloaded by the candidate himself/herself from the website/portal.**
- Candidate should take utmost care to furnish the correct details while filling in online application form. Any mistake committed by the candidate shall be his/her sole responsibility.
- The candidate should ensure the completion of all Steps of the registration process and deposition of application fee as mentioned in the instructions by the stipulated date.
- Application once submitted will not be allowed to be withdrawn and fee once paid will neither be refunded in any case, nor shall it be held reserved for any other examination or selection process in future.

अभ्यर्थियों द्वारा ऑन लाइन आवेदन पत्र भरने हेतु निर्देश

- प्रत्येक अभ्यर्थी द्वारा आवेदन पत्र में एक उपयुक्त मोबाइल नम्बर अंकित करना अनिवार्य है। पंजीकरण संख्या, पासवर्ड एवं लिखित परीक्षा/काउन्सिलिंग सम्बन्धी अन्य महत्वपूर्ण सूचनाएं (यदि व्यक्तिगत रूप से देना आवश्यक हो तो) अभ्यर्थी के पंजीकृत मोबाइल नम्बर पर ही प्रेषित की जायेंगी। अभ्यर्थी गोविन्द बल्लभ पंत कृषि एवं प्रौद्योगिक विश्वविद्यालय से सम्बन्धित किसी भी सूचना हेतु अपने पंजीकृत मोबाइल नम्बर पर मैसेज नियमित रूप से चैक करें। अभ्यर्थी अपना पासवर्ड किसी अन्य अभ्यर्थी/व्यक्ति को न बताऐं।
- **कृपया नोट करें कि लिखित परीक्षा हेतु प्रवेश पत्र डाक द्वारा प्रेषित नहीं किया जाएगा। प्रवेश पत्र अभ्यर्थी स्वयं विश्वविद्यालय की वेब साइट/पोर्टल से डाउनलोड करें।**
- ऑन लाइन आवेदन पत्र भरते समय अभ्यर्थी सही विवरण देने हेतु विशेष सावधानी बरतें। अभ्यर्थी द्वारा की गई किसी भी त्रुटि के लिये वे स्वयं उत्तरदायी होंगे।
- अभ्यर्थी निर्देशों में दी गई पंजीकरण प्रक्रिया व परीक्षा फीस जमा करने सम्बन्धी समस्त कार्यवाही निर्धारित तिथि तक पूर्ण करना सुनिश्चित करें।
- एक बार जमा किये गए आवेदन पत्र वापस नहीं किये जायेगें तथा जमा की गई फीस किसी भी स्थिति में न तो वापस की जायेगी और न ही भविष्य में आयोजित होने वाली किसी भी परीक्षा या चयन प्रक्रिया हेतु सुरक्षित रखी जायेगी।

Step-I : Registration.

1. Write Email id.
2. Write Mobile Number (Do not prefix 0 or +91 before mobile number).
3. Write Candidate name (Do not use prefix such as Mr./Ms./Shri./Dr.)
4. Write/Select Date of Birth (dd/mm/yyyy Format) as in High School Certificate.
5. Select Program Applying For.
6. Select Your Domicile State (Uttarakhand/Other).
7. Write captcha Code.

Step-II : Login

8. Write Mobile Number (Do not prefix 0 or +91 before mobile number).

   OR

   Write Registration Number Received on Your Registered Mobile Number.
9. Enter Password received on Your mobile Number

Step-III: Fill Application Form:

10. Write Father's Name (do not write any prefix such as Shri. /Mr./Dr.).
11. Write Mother's Name (do not write any prefix such as Mrs./Smt./Dr.).
12. Enter Aadhaar Number or Aadhaar Enrollment Number.
13. Select Nationality - Indian/Other.
14. Select Gender - Male/Female/Other.
15. Select category you belong to.
16. Select Sub-category you belong to.
17. Select Category Weightage.
18. Select Religion you belong to.
19. Select Physically Challenged – YES/NO
20. Son/Daughter/Spouse of Regular Employee of University- YES/NO.
21. Select EWS Candidate? – YES/NO (Only for General category).
22. Select Your Blood Group and RH factor (RH+/RH-).
23. Have you ever been student of GBPUA&T – YES/NO.
24. Write GBPUA&T Student Id (In case of YES).
25. Write Alternate Mobile Number and Landline Number (Optional).
26. Fill up the Correspondence Address, District, Pin and select State.
27. Fill up the Permanent Address, District, Pin and select State.
28. Fill up the Education/Qualification Details.
29. Select Qualifying Examination (Only In UG, Masters and MCA).
30. Select Subject Group & Code for Entrance Examination (Only In UG, Masters, MCA and Ph.D.).
31. Select Status of Qualifying Examination- Passed/Appearing.
32. Select Examination Centre Choices.
33. Upload Photo, Signature and Left-Hand Thumb Impression.

Instructions regarding scanning of PHOTOGRAPH, SIGNATURE and LEFT HAND THUMB IMPRESSION: Scanned (digital) image of Photograph, signature and Thumb impression should be uploaded as per the specifications given below:

i. Photograph Image:

- Photograph must be a recent passport style colour picture.
- Make sure that the picture is in colour, taken against a light-coloured, preferably white, background.
- Look straight at the camera with a relaxed face.
- If the picture is taken on a sunny day, have the sun behind you, or place yourself in the shade, so that you are not squinting and there are no harsh shadows.
- If you have to use flash, ensure there's no "red-eye".
- If you wear glasses make sure that there are no reflections and your eyes can be clearly seen.
- Caps, hats and dark glasses are not acceptable. Religious headwear is allowed but it must not cover your face.
- Dimensions 200X230 pixels (preferred).
- Size of file should be between 20kb-50kb.
- Ensure that the size of the scanned image is not more than 50kb. If the size of the file is more than 50kb, then adjust the settings of the scanner OR adjust the size of PHOTO in Paint or any other Picture Tools.

ii. Signature image:

- The applicant has to put signature on white paper with Black/Blue ink pen.
- The signature must be signed only by the applicant and not by any other person.
- The signature will be used to put on admit card and wherever necessary.
- If the Applicant's signature on the answer script, at the time of the examination does not match the signature on the admit card, the applicant will be disqualified.

- Please scan the signature area only and not the entire page.
- Dimensions 140X60 pixels (preferred).
- Size of file should be between 10kb – 20kb.
- Ensure that the size of the scanned image is not more than 20kb.

iii. Left Hand Thumb Impression Image:

- The applicant has to put left hand thumb impression on white paper.
- After Scanning ensure that the size of the scanned image is not more than 20kb.
- Dimensions 140X60 pixels (preferred).
- Size of file should be between 10kb – 20kb.

If the file size and format of Photograph, Signature and Thumb do not match with prescribed size and format or not properly loaded, an error message will be displayed. In such case the candidate has to rectify the size and reload it.

34. Submit Application fee.

The candidates can deposit fee in the following ways:

Debit/Credit Card/Internet Banking: The Applicants can deposit fee Online by means of **Debit Card/Credit Card/Internet Banking.** Applicants are advised to keep with them the copy of the **"Online Fee Receipt"** as a token of remittance of fee for future reference.

On successful registration of on-line application, candidates are advised not to attempt for registration for the same Course again since multiple registration numbers and passwords may create problem for candidates in future. In case of multiple registrations for the same Course, the candidature is liable for cancellation/rejection without any notice/intimation to the candidate.

35. Print Confirmation page and preserve it for records

The candidate must retain a photocopy of his/her filled in Confirmation Page and fee receipt for future correspondence.

THIS COMPLETES THE PROCESS OF ONLINE FILLING OF APPLICATION FORM.

CHAPTER- I

1. The Govind Ballabh Pant University of Agriculture & Technology was established in 1960 by an Act of the State Legislature of Uttar Pradesh, enacted in 1958. The objectives of the University, as outlined in the Act are: -
   (a) making provision for the education of rural people of the State in different branches of study, particularly agriculture, rural industry, business and other allied subjects;
   (b) furthering the prosecution of research, particularly in agriculture and other allied sciences; and
   (c) undertaking field and extension programmes.
2. This is purely a residential University. All students should reside in the hostels in main campus.
3. The University ensures individual attention to each and every student through its advisory system. The advisory system is supplemented by a system of student counsellors. For each group of 15 to 20 first-degree students, a teacher advisor is appointed. At postgraduate level, for each student, an advisory committee, consisting of 3-4 teachers is appointed. The teacher-advisor guides, supervises and monitors the academic performance of his/her advisees besides helping them in their personal problems. He/She also maintains a close contact with parent/guardians of his/her advisees.
4. The structure and objective envisaged for the University represent a departure from the system of education prevalent in the country, which had essentially scholastic orientation. It was meant to function primarily as an instrument of development by integrating research, teaching and extension and assuming specific responsibility for introducing improvements, wherever necessary, in every aspect of rural life. The imperative is reflected in both the character of the faculties and departments as well as in the establishment of Directorates of Experiment Station and Extension Education, which are expected to take a holistic view of development and ensure not only inter-disciplinary research but also synthesize ideas emanating from different Colleges.
5. The diverse activities of the University are reflected in the departmental organization of various Colleges. Details of Teaching faculty can be seen on the website of the University.

COLLEGE OF AGRICULTURE

Deptt. of Agricultural Communication
Deptt. of Agricultural Economics
Deptt. of Agrometeorology
Deptt. of Agronomy
Deptt. of Entomology
Deptt. of Food Science & Technology
Deptt. of Genetics and Plant Breeding
Deptt. of Horticulture
Deptt. of Plant Pathology
Deptt. of Soil Science
Deptt. of Vegetable Science

COLLEGE OF BASIC SCIENCE & HUMANITIES

Deptt. of Biochemistry
Deptt. of Biological Sciences
Deptt. of Chemistry
Deptt. of Environmental Sciences
Deptt. of Mathematics, Statistics & Computer Sc.
Deptt. of Microbiology
Deptt. of Molecular Biology & Genetic Engineering
Deptt. of Physics
Deptt. of Plant Physiology
Deptt. of Social Sciences & Humanities

COLLEGE OF VETERINARY & ANIMAL SCIENCES

Deptt. of Veterinary Anatomy
Deptt. of Animal Nutrition
Deptt. of Animal Genetics & Breeding
Deptt. of Veterinary Gynaecology & Obstetrics
Deptt. of Livestock Production Management
Deptt. of Livestock Products Technology
Deptt. of Veterinary Medicine
Deptt. of Veterinary Microbiology
Deptt. of Veterinary Parasitology
Deptt. of Veterinary Pathology
Deptt. of Veterinary Pharmacology and Toxicology
Deptt. of Veterinary Physiology & Biochemistry
Deptt. of Veterinary & Animal Husbandry Extension Education
Deptt. of Veterinary Public Health & Epidemiology
Deptt. of Veterinary Surgery and Radiology

COLLEGE OF TECHNOLOGY

Deptt. of Civil Engineering
Deptt. of Computer Engineering
Deptt. of Information Technology
Deptt. of Electrical Engineering
Deptt. of Electronics and Communication Engineering
Deptt. of Farm Machinery and Power Engineering
Deptt. of Irrigation and Drainage Engineering
Deptt. of Mechanical Engineering
Deptt. of Post Harvest, Process and Food Engineering
Deptt. of Industrial and Production Engineering
Deptt. of Soil & Water Conservation Engineering

COLLEGE OF FISHERIES
Deptt. of Aquaculture
Deptt. of Fisheries Resource Management
Deptt. of Aquatic Environment Management
Deptt. of Fish Harvest & Processing Technology
Deptt. of Fisheries Extension Education

COLLEGE OF AGRI BUSINESS MANAGEMENT
Deptt. of Agribusiness Economics & Policy
Deptt. of Financial Management
Deptt. of Human Resource & Personnel Management
Deptt. of Marketing Management
Deptt. of Production Management

Centers
Business Management Clinic
Information Technology Management
Management Development Programme
Placement and Counselling

COLLEGE OF HOME SCIENCE
Deptt. of Human Development & Family Studies
Deptt. of Clothing and Textiles
Deptt. of Family Resource Management
Deptt. of Foods and Nutrition
Deptt. of Home Science Extension

COLLEGE OF POST GRADUATE STUDIES
The College consists of 62 departments. 64 and 54 Masters and Ph.D. degree programmes respectively are offered by these departments.

6. To support the functions of various departments, the supportive services comprises of Communication Centre, Computer Centre, Radiation and Isotopic Tracers Laboratory, Electron Microscopic Laboratory, Veterinary Clinics, Plant Clinics, Seed Testing Laboratory, ARIS Cell, Environmentally Controlled Poly Carbonate Chamber, Green House Gases Monitoring Centre, Seismological Lab., Agricultural Information Centre, the Research Station, University Farm and Library.

7. **DEPARTMENT OF STUDENT WELFARE**

The Department of Student Welfare provides ample opportunities and facilities for the all round development of personality and leadership qualities to the students. Special emphasis, however, is laid on discipline, besides higher standard of academic performance. Students participate effectively in the management of hostels, food services, games & sports, cultural and literary activities. Professional societies of every colleges function under the guidance of Staff Counsellor. It coordinates activities and provides facilities as well as services as under:-

(A) Extra-Curricular Activities

University as well as College level extra-curricular activities such as literary, cultural, social activities are organized quite oftenly through 08 professional societies besides hostel level activities. An elegant university auditorium with 900 seating capacity, two mini auditoria, college halls, musical instruments, double film projector and audio-visual aids are available for the organization of various events viz. debates, elocutions, arts and crafts, music, dance, folk songs and drama besides contests, professional competitions and personality development activities. University is having two NCC units i.e. Remount and Veterinary core and Air wing since 14 May, 2005. Remount and Veterinary NCC is especially for veterinary graduate under which ICC Cadets be imparted training on hourse riding & management of equines, where as in the Air wing cadets are given training on microlite plane flying and insimulator also.

(B) Games and Sports

More than 16 games & sports activities are organized in the university through 26 different clubs. There are 13 staff counsellors for games and sports for boys and girls. The University provides sufficient sports material to all the hostels as well as University level teams. There is existence of sufficient numbers of playgrounds for sports and games in addition to a full-fledged stadium. Multi purpose sports hall, adequately equipped gymnasium and physical fitness centre for students.

(C) Liberal Education

The Liberal Education programme coordinated by the Department of Student Welfare which attempts to provide a holistic and more creative dimension to the student's personality development. The Liberal Education, while inculcating social, cultural, spiritual, ethical and aesthetics values amongst students, it provides them ample opportunity to learn various provincial and international languages, art, cultures, yoga's etc. In addition to students, campus inmates also participate in the Liberal Education programmes.

This is basically a certificate course, absolutely voluntary and having no bearing on the Overall Grade Point Average of the students.

(D) Hostels

All students of the University are required to reside in hostels. There are 22 hostels including 10 hostels for girl students and one for married students with separate arrangements for post-graduate and undergraduate students. There is a common room facility in each hostel for entertainment, indoor games for the hostel inmates and a small library having selected books, magazines and newspaper etc. In most of the hostels, courts for volleyball, badminton, basketball and table tennis are available. The hostel cafeteria is equipped with refrigerator, R.O. system, water cooler and utensils in adequate quantity. Each hostel cafeteria is run and managed by the students on cooperative/Contract basis. The students are required to vacate the hostel rooms in the summer vacation in order to facilitate annual repairs and white washing etc. All students residing in the hostel are to abide by hostel and cafeteria regulations/rules. Every Hostel has one landline telephone with incoming facility. Ambulance facility is available to students for medical aid in case of any emergency.

The students are not permitted to keep firearms, motorized vehicles, record players and tape recorders in the hostel or carry with them in the campus. They are also advised not to keep jewellery, camera and heavy cash with them in the hostel. During tournaments and sports competitions, the students are expected to be in the proper attire.

In case, a student indulges himself/herself in the acts of indiscipline, he/she likely to be removed from the hostel and they have to make own arrangements outside the campus at their own risk and cost.

(E) Grievances Redressal Registry: The University has established a committee for redressal of grievances of the students and DSW is the Nodal Officer of the committee. The aggrieved students of the University may register complaints in Office of Dean Student Welfare.

(F) Financial Aid/Bursaries/Scholarships

(i) Ph.D. Programmes: Two fellowships in each discipline are to be awarded @6000/- per month on the basis of merit to the eligible students admitted in the discipline for period of 36 months. If the total number of fellowships thus provided are not utilized due to any valid reasons whatsoever, the University shall be fee to redistribute the allocation of the vacant fellowship position and award the same to other students who could not be granted fellowship in the first instance due to the aforesaid restriction of two fellowships in each discipline. However, this latter award shall be based on academic rating and shall be made after all admission in question have been made for the academic year.

(ii) Masters' Programmes: Master's degree (except self-financing programmes) students upto 50% of the total in respect of each Major are awarded Graduate Research/Teaching Assistantship as per regulations on the subject. However, the value of Assistantship will be of Rs. 3000/- per month for the student who stands first in the merit and for the rest the value of the assistantship shall be Rs.2000/- per month in each degree programme.

(iii) GATE fellowships are provided to GATE qualified M.Tech. students for a period of 24 months.

(iv) Exemption in tuition fee: The exemption in tuition fee is awarded to the wards (sons/ daughters/spouses) of regular employees of the University as per rules.

(v) Undergraduate Programmes: Financial assistance provided by the University to the Undergraduate student as per the details given below:

Sl.	Name	Value	Remarks
1.	University Merit Scholarship	Rs. 800/- per month	Awarded to the best three students in each degree programme in each batch.
2.	Free ship in Tuition fee		25% of the students admitted to the undergraduate programmes of all colleges of the University shall be allowed freeship to tuition fee whose parents income is below 1,00,000/-.
3.	Sports Scholarship	Rs.800/- per month	Awarded to the best six all round three sportsmen and three sports women as per prescribed rules.

In addition, following scholarship and financial assistance are also available from outside agencies:

1. Merit-cum-Means Scholarship (ICAR)
2. Backward Class Scholarship
3. S.C. and S.T. Scholarship.
4. Scholarship for Nominees of different States.
5. Nepal Aid Fund.
6. National Talent Scholarship (ICAR)
7. ICAR Sr./Jr. Fellowship.
8. UGC Sr./Jr. Fellowship.
9. CSIR Sr./Jr. Fellowship.
10. ICMR (Ph.D.) Fellowship.
11. ONGC Scholarship
12. NCERT Scholarship
13. Shamji Memorial Trust Scholarship
14. Uttarakhand Krishi Utpadan Mandi Parishad Scholarship
15. S.J. Jindal Trust Scholarship
16. Major H.S. Sandhu Scholarship
17. Mata Raj Kami Scholarship for Scheduled/ Backward Castes.
18. ICAR Scholarship for Foreign Students
19. under various cultural exchange programmes.
20. Dr. V.N. Mathur Award (M.Sc. Mathematics)
21. Smt Bimla Rani Menorial Award
22. Indian Herbs Scholarship
23. Monsanto Scholarship
24. Sh. Satguru Dayanand Memorial Scholarship
25. Smt. Uma Gupta Fellowship.
26. S.K. Mukherjee Scholarship
27. GATE Fellowship
28. Bayers Fellowship
29. Priyank Pathak Scholarship
30. Bharti Scholarship
31. Amit Gautam Award
32. S.N. Nayar Memorial Scholarship
33. INSPIRE Fellowship.
34. UGC Scholarship for M.Tech.
35. DOW Agro Sciences Scholarship
36. Scholarship for Physically Handicapped.
37. Dr. Dhyan Pal Singh Memorial Award
38. Merit Scholarship to the students of Agricultural Engineering.
39. Lt. Shri Varun Panwar Memorial Award
40. Dr. K.C. Sharma Felloship.
41. Dhanuka Agri. Tech. Fellowship.
42. Asian Agri History Foundation Res. Fellowship (M.Sc.Ag)
43. Dr. S.K. Sharma and (Ph.D. Mathematics)
44. ICSSR (Ph.D.)

(G) Medi-claim Facilities

The University has implemented cashless Medi-claim policy for the students from the academic year 2007-2008. The Medi-claim fees, as prescribed by the University, is payable by the students at the beginning of an academic year. Payment of bills for the treatment of the students is paid as per insurance policy and cashless treatment through paneled hospitals is also being provided to the students.

(H) Discipline

Discipline is the Backbone of any institution. College discipline boards (CDB) in the college university discipline committee (UDC) at University level exist for maintaining discipline amongst the students. For this purpose, an affidavit as per annexure-1 is also required to be submitted at the time of counselling.

8. PLACEMENT & COUNSELLING

The University imparts job-oriented professional education in the field of Agriculture, Animal Science, Veterinary Science, Home Science, Forestry, Fisheries, Engineering, Management and Basic Sciences. The duty of the University towards its students does not end here, but also includes finding suitable employment for its alumni, so that their training and abilities are used for the benefit of the nation. In order to achieve this object, the University has setup a full-fledged Directorate of Placement and Counselling, which is a unique feature of the University.

9. UNIVERSITY LIBRARY

The mission of the library is to provide best learning resources and services facilitating different colleges of the University for Quality Instruction, extension and also to meet out the research and information needs of the students and faculty members.

Library has core infrastructure and learning resources of about 4.26 lakh collections and more the 7000 online journals and e-book series, besides an Institutional Digital Repository having theses/research work of students to provide information services in automated and networked environment. The library has been upgraded to a Smart Library having Kiosk based Self Checkout

system, Book Drop facilities SMS/E-Mail Alert for overdue books, Digital Passbook, Smart Cards for quick and efficient loans and CCTV for surveillance and security. The in house activities are automated using advanced technologies like REID and open source library management system, most of the in-house services are supported by the digital devices. Library has Spaces for Discussion, Silent Reading zones and Spaces for e-Resources and a Digital wall. Several online and offline bibliographic databases, e-books and information is accessible through collaborative online platforms like AgriCat, Krishikosh and CeRA. The University library has embraced technology oriented services, creativity and flexibility to transform its services in digital world essentially to drive the cutting edge of knowledge management and dissemination. Recently QR codes have been introduced to provide services through Mobile a device which is quite popular among students. The library website is the gateway to most of the library resources, information and the online catalogue accessible 24 × 7 everywhere.

10. MEDICAL HEALTH SERVICES

(a) Outdoor ward facilities: The University hospital has following outdoor facilities:

1. **Medical Officers**
2. **Dental Surgeon**
3. **Eye Surgeon**
4. **Lady Medical Officer**
5. **Orthopedic Surgeon (Monday Only)**

(b) Indoor ward facilities: The University hospital has indoor facilities on the male as well as female wings where the University students are kept under observation for a short period. Those need prolong hospitalization are referred and shifted to Sushila Tewari Hospital, Haldwani (Nainital) and to hospitals providing care through insurance agency whose list is provided by the Dean Student Welfare for needful treatment as per University rules. Emergency services are available round the clock and doctors are on call duty & remain present at their residence.

(c) Investigation facilities: The facilities of limited pathological investigation as well as Plain X-ray are available at the University hospital/College of Veterinary and Animal Sciences.

(d) Ambulance facilities: Facilities of ambulance is also available for transportation of seriously ill students from their hostel to the Hospital and on the request of Warden concerned for transportation to an outside hospital, if necessary.

(e) Prophylactic Measures: Immunization and vaccinations are performed every Wednesday and Friday.

CHAPTER – II

ADMISSION CRITERIA AND ENTRANCE EXAMINATION

1. **ADMISSION TO THE UNIVERSITY IMPLIES ACCEPTANCE WITHOUT ANY MODIFICATION BY THE CANDIDATE AND HIS/HER PARENTS/GUARDIANS OF ALL PROVISIONS GIVEN IN THE UNIVERSITY ACT, STATUTES, REGULATIONS AND ADMISSION POLICY AND CHANGES THAT ARE MADE FROM TIME TO TIME THEREIN.**
2. **THE STUDENTS WHO HAVE BEEN PERMANENTLY DROPPED OR TEMPORARILY DISMISSED FROM THIS UNIVERSITY EITHER ON ACCOUNT OF ACTS OF INDISCIPLINE, OR THOSE WHO HAVE BEEN DEBARRED FROM SEEKING ADMISSION FROM THIS UNIVERSITY SHALL NOT BE ALLOWED TO APPEAR IN THE ENTRANCE EXAMINATION, OR SEEK ADMISSION AS A SPONSORED/ NOMINATED CANDIDATE. THE STUDENTS WHO ARE/WERE DROPPED FROM A DEGREE PROGRAMME OF THE UNIVERSITY ON ACCOUNT OF POOR ACADEMIC PERFORMANCE SHALL BE ALLOWED TO TAKE ADMISSION AFRESH IN OTHER DEGREE PROGRAMMES BY CLEARING THE ENTRANCE EXAMINATION AS IN CASE OF OTHERS. HOWEVER, THEY WILL NOT BE ALLOWED TO TAKE ADMISSION IN THE SAME PROGRAMME. IN CASE, THEY ARE AGAIN DROPPED ON ACCOUNT OF POOR ACADEMIC PERFORMANCE THEY WILL NOT BE ALLOWED TO TAKE ADMISSION IN ANY PROGRAMME OF THE UNIVERSITY IN FUTURE.**
3. **IF ANY DOCUMENT SUBMITTED BY THE CANDIDATE IS FOUND TO BE FALSE AT ANY STAGE DURING HIS/HER STAY IN THE UNIVERSITY, HIS/HER ADMISSION WILL BE CANCELLED.**
4. **THE INFORMATIONS INDICATED IN THIS PROSPECTUS ARE ONLY FOR GENERAL GUIDANCE AND CAN BE MODIFIED/CHANGED FROM TIME TO TIME BY THE BOARD OF MANAGEMENT/ ACADEMIC COUNCIL OF THE UNIVERSITY.**
5. All admissions shall be made strictly on merit as determined on the basis of marks obtained by the candidates in the Entrance Examination to be conducted by University, **except the following**:
   (a) Admissions to **B.Tech.** Programmes (except B.Tech. Food Tech.) shall be made by the University on the basis of merit of **Joint Entrance Examination (JEE) through the counseling carried out by Uttarakhand Technical University**. However, 50% seats of B.Tech. Biotech. Programme will be filled through JEE and 50% seats through the University Entrance Examination.
   (b) Admissions to DBT supported Master's programme (M.Sc. Agricultural Biotechnology) shall be made through online counseling from the list of qualified candidates received from DBT Regional Centre for Biotechnology, Faridabad, which is responsible for conducting Graduate Aptitude Test-Biotechnology (GAT-B) for admission to the above said programmes through out the country.
   (c) Admission to **Ph.D. programmes in Agronomy and Plant Pathology** for Other State candidates shall be made through ICAR entrance examination only. Candidates belonging to other states need not apply for Pantnagar entrance examination in the mentioned disciplines of **Agronomy and Plant Pathology.** Whereas, admissions to other Ph.D. programmes for Other State candidates are made through the university entrance examination as well as entrance examination conducted by ICAR for this purpose. In case, domicile candidates of Uttarakhand are not available for the sanctioned seats, the same shall be filled from amongst candidates of Other States and Vice-Versa.
   (d) Admission to Masters' programmes in **MBA/MBA (Agribusiness)** shall be made through **CAT** and **CMAT** score and Group Discussion and an Interview conducted by the University. The final admission process for MBA/MBA (Agribusiness) will be conducted by College of Agribusiness Management (CABM) of the university.
   (e) In M.Tech. programmes, admission shall be made first based on the **GATE qualifying marks in the subject (Major) in which admission is sought**. Vacant seats shall be filled based on OGPA/percentage (%) of marks of B.Tech. The candidate should have secured at least an OGPA of not less than 6.000/10.000 or 3.000/5.000 or 55% marks in aggregate in case of the Institutions/ Universities where these scales are not applicable in the Bachelor's degree. However, admission towards seats for Other State candidates in M.Tech. Agricultural Engineering majors shall be made through Entrance Examination conducted by ICAR. In case, domicile candidates of Uttarakhand are not available for the sanctioned seats, the same shall be filled from amongst candidates of Other States.
   (f) Admissions to MCA programme shall be made on the basis of separate Entrance Examination to be conducted by the University. In case, a candidate wants to appear for other Masters' programmes in addition to MCA, he/she has to fill separate application form.
   (g) Candidates other than **Bonafide residents of Uttarakhand** are also eligible to fill up application form for admission to the Undergraduate programmes but their candidature will be considered only on payment seats. However, the wards of J& K Residents and wards of Kashmiri Migrants as well as Kashmiri Pandits residing in Kashmir valley may also apply for admission to UG programmes for sanctioned seats. Other State seats of UG (except B.V.Sc. & A.H.) and Masters' programmes are

also filled up through the examination conducted by Indian Council of Agricultural Research (ICAR). The list of candidates for filling up other state seats of B.V.Sc. & A.H. is provided by Veterinary Council of India (VCI). Other State candidates' interested seeking admission for the said programmes may contact the concerned authorities through the websites of ICAR or VCI, as the case may be.

6. Time of Admission

Admissions to all Undergraduate and Masters' degree programmes shall be made in the first Semester of the ensuing academic year only. However, admissions to Ph.D. degree programmes shall be made in first as well as in second semester (provided seats remain vacant in the first semester).

7. Date and Time of Entrance Examination

The Entrance Examination shall be conducted on the following dates and time:

1. Masters' and Ph.D. Programmes	30-07-2022	10.00 a.m. to 1.00 p.m.
2. Undergraduate Programmes and M.C.A. Programme	31-07-2022	10.00 a.m. to 1.00 p.m.

8. Places of Examination

The Entrance Examination shall be conducted at following places:

PLACE CODE	U.G. PROGRAMME	MASTERS' PROGRAMME	MCA PROGRAMME	Ph.D. PROGRAMME
1	Almora	-	-	-
2	Dehradun	Dehradun	-	-
3	Haldwani	-	-	-
4	Pantnagar	Pantnagar	Pantnagar	Pantnagar
5	Pithoragarh	-	-	-
6	Rishikesh	-	-	-
7	Srinagar (Garhwal)	-		-

Note: (i) Every effort will be made to assign the place of choice of the candidate. However, the University reserves the right to assign the candidate to any one of the above places without assigning any reason.

(ii) The place once assigned shall not be changed.

(iii) Any of the above places can be changed at the discretion of the University.

9. Application procedure

Online Application Form Procedure

To submit application form candidates should log on to the University website (**www.gbpuat.ac.in).**

The candidates appearing in the qualifying examination can also apply provided they submit copy of original mark-sheet of final year indicating class/division obtained at time of online counselling failing which their candidature will not be considered for counselling.

10. Last date for application Form and Application Form fee

(a) (i) Last date for online filing of application form for UG, Masters, MCA and Ph.D. 31.05.2022

(ii) Last date for online filing of application form for M.Tech. Programmes and Sponsored Candidates for Masters, M.Tech. and Ph.D. programmes 31.05.2022

(b) Application Form fee for M.Tech. /sponsored candidate/fellowship holder of UGC/ICAR/CSIR/ DBT etc. Rs. Rs. 1200/- (General and OBC) and Rs. 600/- (SC, ST and PH).

(c) Application Form fee is NON-REFUNDABLE.

Application Form Fee for all programmes: Rs. 1200/- (General and OBC)
Rs. 600/- (SC, ST and PH).

Note: The candidate seeking admission to MCA programme as well as Masters' (Group-10) are required to fill separate application form.

11. Admission of Sponsored/Nominated Candidates

The candidate(s) sponsored/nominated by the GBPUAT, Pantnagar/Development Departments of State Govt. shall not be required to appear in the Entrance Examination. His/her admission shall be governed by the eligibility requirements, as prescribed in **Appendix-1 (B).**

12. No. of Seats & Eligibility Qualification:

A. Ph.D. Programmes

S. No.	Name of Programmes	Code No.	No. of seats		Minimum Eligibility Qualifications
			UA Domicile	Other States	
Agriculture Majors					
1.	Agricultural Economics	01	03	01	M.Sc.Ag. Agril. Economics/Rural Banking & Agril. Eco. /M.Sc. (Agribusiness Economics) or M.Sc. Dairy Economics/ Livestock Economics/ Forest Economics/ Veterinary Economics/ Fisheries Economics/ Animal Husbandry Economics.
*2.	Agronomy	02	05	Nil	M.Sc.Ag. Agronomy.
3.	Agrometeorology	03	03	01	M.Sc. Ag./M.Sc. in Agrometeorology/Agricultural Physics.
4.	Agricultural Extension & Communication	04	04	01	Masters' degree in the area of Development Communication/ Agricultural Extension/ Extension Education/Agricultural Extension & Communication/ Home Science Extension Education/ Dairy Extension / Veterinary Extension/ Fisheries Extension.
5.	Entomology	05	05	01	M.Sc. Ag. Entomology or M.Sc. Zoology with specialization in Entomology.
6.	Genetics & Plant Breeding	06	06	02	M.Sc. Ag./M.Sc. in Genetics & Plant Breeding/ Plant Breeding/ Genetics/ Agril. Botany.
7.	Horticulture (Fruit Science)	07	04	01	M.Sc.Ag./M.Sc. in Horticulture/ Horticulture (Fruit Science)/ Horticulture (Floriculture & Landscaping)/M.Sc. Pomology/ M.Sc. Fruit Science.
8.	Horticulture (Floriculture and Landscaping)	08	03	01	M.Sc.Ag./M.Sc. in Horticulture/ Horticulture (Floriculture & Landscaping)/ Horticulture (Fruit Science)/ Floriculture/ Floriculture & Landscape Architecture/Fruit Science
*9.	Plant Pathology	09	04	Nil	M.Sc.Ag. in Plant Pathology/ Mycology & Plant Pathology/ Plant Protection with specialization in Plant Pathology.
10.	Soil Science and Agricultural Chemistry	11	04	01	M.Sc. Ag. in Soil Science/Agril. Chemistry/ Agril. Physics/ Soil Science and Agricultural Chemistry/ Agricultural Physics (Soil Physics and Soil and Water Conservation).
11.	Horticulture (Vegetable Science)	12	04	01	M.Sc. Ag. in Horticulture (Vegetable Science)/ Olericulture /Horticulture with specialization in Vegetable Science/M.Sc. Ag. Vegetable Science
Engineering Majors					
1.	Electrical Engineering	20	03	01	Bachelor's degree in Electrical Engg./Electrical & Electronics Engg. from a recognized University/ Institute and Masters' degree in the related field of Electrical Engg. from a recognized University/ Institute.
2.	Electronics & Communication Engineering	21	05	01	Bachelor's Degree in Electronics & Communication Engg./Communication Engg./ Telecommunication Engg./ Electronics Engineering from a recognized University / Institute and Masters' Degree in related field of Electronics & Communication Engineering from a recognized University/Institute.
3.	Farm Machinery & Power Engineering	22	04	01	Master's Degree in Farm Machinery & Power Engineering/Agricultural Engineering/Mechanical Engineering/ Renewable energy from a recognized University.

4.	Civil Engineering	23	04	01	Bachelor's degree in Civil Engineering and Master's degree in Civil Engineering with one of the following specialization from recognized University/Institute- Structural Engg./Computer aided design in Structural Engg./ Earthquake Engg./Hydraulic Engg./ Water Resources Engg./ Geotechnical Engg./ Soil Mechanics and Foundation Engg./ Transportation Engg./ Environmental Engg./ Hydrology/ Irrigation Water Management/ Hydropower Engg.
5.	Irrigation & Drainage Engineering	24	04	01	Master's Degree in Agricultural Engg. with specialization in Irrigation & Drainage Engineering/ Soil & Water Conservation Engineering/ Soil & Water Engineering/Land and Water Resources Engineering/ Water Resources Engineering/ Masters' degree in Civil Engineering from a recognized University/Institute.
6.	Mechanical Engineering	25	08	02	Master's Degree in Mechanical Engineering with specialization in Thermal Engineering/Thermal Power Engg./ Energy Engg./Automobile Engg./ Production Engg./ Manufacturing Engg. and Management / Design and Production Engg./ Machine Design Engineering/ Machine Design and Analysis/ CAD, CAM and Robotics/ Computer Aided Design and Manufacturing/ Design/ Product Design and Development/ Materials Engg./ Material Science and Engg./ Mechatronics and Automation or related field from a recognized University/ Institute.
7.	Process & Food Engineering	26	04	01	Master's Degree in Agricultural Engineering/ Chemical Engg./ Agricultural Processing/ Agril. Processing and Structures/Agril. Structures and Process Engg./Food Process Engineering/ Post Harvest Engg./Food and Bioprocess Engg./Food Engineering / Process and Agril. Structures/ Process & Food Engg./ Biochemical Engg. / Dairy Engg./ Food Engg. / Food Biotech Engg. / Renewable Energy Engg. from a recognized University.
8.	Production Engineering	27	03	01	Master's Degree in Production Engg./ CAM/CAM & Robotics/ CAD/ Mechanical Engg./ Manufacturing Engg. and Management/ Industrial System Engineering/ Industrial & Production Engineering or related field from a recognized University.
9.	Soil & Water Conservation Engineering	28	04	01	Master's Degree in Agricultural Engineering with specialization in Soil & Water Conservation Engineering/Soil & Water Engineering/ Irrigation & Drainage Engineering / Land and Water Resource Engineering or Masters' Degree in Civil Engineering/ Water Resources/Hydrology/ Water Science and Technology from a recognized University/Institute.
10.	Information Technology	29	02	Nil	ME/M.Tech. degree in Information Technology/ Computer Engg./Computer Science & Engg./ Computer Science/Information Communication Technology from a recognized University.

Community Science Majors					
1.	Food Science and Nutrition	31	01	Nil	M.Sc. Home Science (Foods & Nutrition)/Food Science & Tech./ Nutrition & Dietetics/ Food Science & Nutrition.
2.	Textiles and Apparel Designing	32	04	01	B.Sc. Home Science alongwith M.Sc. Home Science (Clothing & Textiles)/ Clothing & Textiles/Textiles & Clothing/ Textile and Apparel Designing/ Fabric and Apparel Science/ Textiles Sciences and Apparel Design/Apparel and Textiles Sciences/Textiles and Fashion Apparel/ Biotextiles/Textile and Fashion Technology. B.Sc. (Hons.) Community Science alongwith M.Sc. Community Science (Apparel & Textile Science)/ M.Sc. Community Science (Textile & Apparel Designing).
3.	Family Resource Management	33	04	01	M.Sc. Family Resource Management/ Resource Management & Consumer Science/Human Ecology in Consumer Science/Family and Community Sciences/Resource Management and Design Application/ Resource Management and Ergonomics/ Resource Management and Interior Design/Family & Community Resource Management/Community Science
Fisheries Science Major					
1.	Aquaculture	38	03	01	M.F.Sc. Aquaculture/Mariculture/Aquatic Environmental Management/Inland Aquaculture.
Science Majors					
1.	Agricultural Statistics/ Statistics	39	02	Nil	M.Sc. Statistics/Agricultural Statistics/M.Sc. Applied Statistics.
2.	Agricultural Chemicals	40	03	01	M.Sc. Ag./M.Sc. in Agricultural Chemicals.
3.	Biochemistry	41	01	Nil	M.Sc. Ag./M.Sc. in Biochemistry/ Microbiology/ Molecular Biology & Biotech./Biophysics/ Biotechnology.
4.	Botany	42	02	Nil	Master degree in Botany/Plant Sciences/Plant Physiology / Environmental Sciences.
5.	Chemistry	43	04	01	M.Sc. Chemistry from a recognized University.
6.	Environmental Science	44	02	Nil	M.Sc.Ag./ M.Sc. in Environmental Science/ Environmental Biology/Agroforestry/ Agricultural Physics/Agriculture with specialization in Environmental Science.
7.	Food Technology	45	03	01	M.Sc. Food Technology/Food Science & Technology / Food Science/Masters' degree in Post Harvest Technology/M.Tech. Food Science & Technology.
8.	Mathematics	46	03	01	M.Sc. in Mathematics /Applied Mathematics
9.	Microbiology	47	02	Nil	M.Sc. Ag. in Microbiology/M.Sc. Microbiology/ M.Sc. Environmental Microbiology/Biochemistry / Food Technology/Biotechnology/ Environmental Science / Foods & Nutrition/ Molecular Biology and Biotechnology.
10.	Molecular Biology & Biotechnology	48	04	01	M.Sc.Ag./M.Sc. in Biochemistry / Microbiology/ Biotechnology/ Molecular Biology & Biotechnology/ Genetic Engineering/M. Tech. Biotechnology/ M.Sc. Ag. Genetics & Plant Breeding.
11.	Physics	49	03	01	Master's Degree in Physics/Applied Physics/Astro Physics/Bio-Physics/Material Science / Electronics/ Computer Science.

12.	Plant Physiology	50	03	01	M.Sc./M.Sc.Ag. in Plant Physiology/ Crop Physiology/ Agronomy/ Horticulture/ Botany/ Bio-Sciences/ Plant Sciences/ Environmental Science.
Veterinary Science Majors					
1.	Veterinary Public Health & Epidemiology	51	03	01	M.V.Sc. in Veterinary Public Health & Epidemiology.
2.	Veterinary Gynaecology & Obstetrics	52	03	01	M.V.Sc. Gynaecology & Obstetrics/Animal Reproduction.
3.	Livestock Production & Management	53	04	01	M.V.Sc. in LPM.
4.	Veterinary Medicine	54	03	01	M.V.Sc. in Veterinary Medicine/ Veterinary Clinical Medicine/Veterinary Preventive Medicine.
5.	Veterinary Microbiology & Immunology	55	03	01	M.V.Sc. in Veterinary Microbiology & Immunology/ Veterinary Microbiology/ Veterinary Bacteriology/ Veterinary Virology/ Veterinary Immunology.
6.	Veterinary Pathology	56	03	01	M.V.Sc. Pathology.
7.	Veterinary Pharmacology & Toxicology	57	03	01	M.V.Sc. Vety. Pharmacology/Vety. Pharmacology & Toxicology.
8.	Veterinary Physiology	58	03	01	M.V.Sc. Veterinary or Animal Physiology
9.	Poultry Science	59	03	01	M.V.Sc. in Poultry Science/ Poultry Husbandry/ LPM.
10.	Vety. Surgery & Radiology	60	03	01	M.V.Sc. Surgery & Radiology.
11.	Veterinary Biochemistry	61	02	Nil	M.V.Sc. in Veterinary Biochemistry.
12.	Animal Genetics & Breeding	62	03	01	M.V.Sc. in Animal Genetics & Breeding.
13.	Animal Nutrition	63	03	01	M.V.Sc. in Animal Nutrition.
14.	Veterinary Anatomy	64	03	01	M.V.Sc. in Veterinary Anatomy.
15.	Veterinary Parasitology	65	03	01	M.V.Sc. in Veterinary Parasitology
16.	Livestock Products Technology	66	03	01	M.V.Sc. in Livestock Products Technology/Animal Products Technology.
Management Major					
**1.	Management	70	02	Nil	Masters' Degree or equivalent in Business Administration/ Management.

*Admission to **Ph.D. programmes in Agronomy and Plant Pathology** for Other State candidates shall be made through ICAR entrance examination only. Candidate need not apply for Pantnagar entrance examination for Other State seats in the mentioned disciplines of **Agronomy and Plant Pathology**.

****Self –Financing**

The candidate possessing above qualifications and fulfilling the conditions laid down hereunder shall have to qualify the written test and secure a place in the merit list so as to be eligible for admission:

(a) At Master's level, the candidate should have secured an OGPA not less than 6.500/10.000 or 4.000/5.000 or Ist Division in case of the Universities where these grading scales are not applicable. At Bachelor's level the candidate must possess an Overall Grade Point Average of not less than 6.000/10.000 or 3.000/5.000 or 55% marks in aggregate in case of the Institutions/Universities where these grading scales are not applicable.

(b) Besides a candidate must also possess the eligibility qualifications prescribed for Masters programmes of the University in the relevant discipline.

(c) A relaxation of 5% marks, or an equivalent relaxation of grade at Master's level only, will be allowed to those belonging to SC/ST/OBC (non-creamy layer)/Differently-Abled categories of candidates.

Note: The students having M.Sc. Statistics/M.Sc. Applied Statistics will be awarded Ph.D. with major in Statistics and those having M.Sc. Agricultural Statistics will be awarded Ph.D. with major in Agricultural Statistics.

B. Masters' Programmes

S. No.	Name of the Programmes	No. of Seats	Minimum Eligibility Qualifications
Agriculture Majors			
1.	Agricultural Economics	08	{B.Sc. or B.Sc. (Hons.)} in Agriculture/ Fisheries/ Forestry/ Horticulture/ Home Sc./ Agril. Marketing / Agricultural Marketing and Cooperation/ Community Science.

2.	Agrometeorology	03	{B.Sc. or B.Sc. (Hons.)} in Agriculture / Forestry/ Horticulture or B.Sc. with Physics as one of the major subject.
3.	Agronomy	10	B.Sc. Ag./ B.Sc. (Hons.) Ag.
4.	Agricultural Extension & Communication	08	{B.Sc. or B.Sc. (Hons.)} in Agriculture/ Forestry/ Horticulture/ Home Science/ Fisheries/ Food Sc. & Technology/Dairy Sc./ Sericulture/ B.V.Sc. & A.H./B.V.Sc./ Community Science.
5.	Entomology	08	{B.Sc. or B.Sc. (Hons.)} in Agriculture/ Forestry/ Horticulture/ Sericulture.
6.	Genetics & Plant Breeding	12	{B.Sc. or B.Sc. (Hons.)} in Agriculture/ Forestry/ Horticulture.
7.	Horticulture (Fruit Science)	08	{B.Sc. or B.Sc. (Hons.)} in Agriculture / Horticulture/Forestry.
8.	Horticulture (Floriculture and Landscaping)	04	{B.Sc. or B.Sc. (Hons.)} in Agriculture/ Horticulture/Forestry.
9.	Plant Pathology	08	{B.Sc. or B.Sc. (Hons.)} in Agriculture / Forestry/ Horticulture.
10.	Soil Science and Agricultural Chemistry	08	{B.Sc. or B.Sc. (Hons.)} in Agriculture/ Horticulture/ Forestry.
11.	Horticulture (Vegetable Science)	06	{B.Sc. or B.Sc. (Hons.)} in Agriculture/ Horticulture.
		Engineering Majors	
1.	Agril. Engineering (Farm Machinery & Power Engg.)	10	Bachelor's Degree in Agricultural Engineering from a recognized University/Institute.
2.	Agril. Engineering (Irrigation & Drainage Engineering)	12	Bachelor's Degree in Agricultural Engineering / Civil Engineering from a recognized University/ Institute.
3.	Agricultural Engineering (Process & Food Engineering)	08	Bachelor's Degree in Agricultural Engineering / Chemical Engg./ B.Tech. Food Sc./B.Tech. Food Tech./ B.Tech. Dairy Technology /B.Tech. Food Engg. from a recognized University/ Institute.
4.	Agril. Engineering (Soil & Water Conservation Engg.)	10	Bachelor's Degree in Agricultural Engineering /Civil Engineering from a recognized University /Institute.
5.#	Computer Engineering	10	B.Tech./B.E. degree in Computer Engineering/Computer Science & Engineering/Computer Science/Information Technology/ Information Communication Technology from a recognized University/Institute.
6.#	Design & Production Engineering	10	Bachelor's Degree in Mechanical Engg./Mechanical & Automation / Production Engg./ Industrial & Production Engg. from a recognized University/Institute.
7.#	Electrical Energy System	12	Bachelor's Degree in Electrical Engineering/Electrical and Electronics Engineering from a recognized University/Institute.
8#	Electronics & Communication Engineering	14	Bachelor's Degree in Electronics & Communication Engineering/ Electronics Engineering/Communication Engineering/Tele Communication Engineering from a recognized University/ Institute.
9.#	Hydraulic Engineering	04	Bachelor's Degree in Civil Engg. from a recognized University/ Institute.
10.#	Information Technology	06	B.E./B.Tech. degree in Information Technology/Computer Engineering/ Computer Science & Engineering/Computer Science/ Information Communication Technology from a recognized University/ Institute.
11.#	Manufacturing Engineering and Management	06	B.Tech./B.E./B.Sc. (Engg.) Degree in Mechanical Engg./ Production Engg./ Industrial Engg./ Mechanical/Production and Tool Engg./ Production Technology and Manufacturing Engg./ Mechatronics/ Manufacturing Process and Automation/ Production and Industrial Engg./ Industrial and Production Engg./ Manufacturing Technology/ Mechanical and Production Engg./ Automation Engg. from a recognized University/Institute.
12.#	Soil Mechanics & Foundation Engineering	04	Bachelor's Degree in Civil Engineering from a recognized University/ Institute.
13.#	Structural Engineering	04	Bachelor's Degree in Civil Engineering from a recognized University/Institute.

14.#	Thermal Engineering	10	Bachelor's Degree in Mechanical Engineering/ Automobile Engineering from a recognized University/Institute.
Fisheries Science Majors			
1.	Aquaculture	04	Bachelor's Degree in Fisheries Science
2.	Aquatic Environment Management	04	Bachelor's Degree in Fisheries Science
3.	Fish Processing Technology	04	Bachelor's Degree in Fisheries Science
Community Science Majors			
1.	Textiles and Apparel Designing	06	B.Sc. Home Science/ B.Sc. (Hons.) Community Science/ Home Economics/ Family & Community Sciences alongwith Intermediate Science.
2.	Family Resource Management	04	B.Sc. Home Science/Home Economics /Family & Community Science/ B.Sc. (Hons.) Community Science with Intermediate Science.
3.	Food Science & Nutrition	04	B.Sc. Home Science with Intermediate Science /B.Sc. Food Tech./ B.Sc. (Hons.) Community Science/B.Sc. Home Economics.
Science Majors			
1.	M.Sc. Ag. Agricultural Chemicals	04	B.Sc. with Chemistry as one of the major subjects/B.Sc. Agriculture / Horticulture/Forestry.
2*.	Agricultural Statistics/ Statistics	04	B.Sc. Ag./B.Sc. (Hons.) Ag. (with Mathematics at Intermediate Level)/ B.Sc. with Maths/Statistics as one of the major subjects.
3.	Biochemistry	05	B.Sc. in Biochemistry/ Biotechnology/ Microbiology/ Agriculture/ Home Science/ Community Science/ Fisheries/ Veterinary Science/ Forestry / Food Tech./ B.Sc. with Chemistry as one of the major subjects/ B.Sc. Horticulture.
4.	Botany	04	B.Sc. with Botany as one of the major subjects.
5.	Chemistry	10	B.Sc. with Chemistry as one of the major subjects.
6.	Environmental Science	03	B.Sc. with Environmental Science/ Environmental Biology as one of the major subjects/ B.Sc. in ZBC/ Agriculture/ Fisheries/Home Science/ Community Science/ Forestry/ Horticulture.
7.	Food Technology	04	B.Sc. Food Technology/ Food Science and Technology/ Dairy Technology/ Agriculture/Fisheries/Home Science / Horticulture/ B.Tech. (Food Technology/Food Science & Technology/ Dairy Technology/ Agril. Engg.)/ B.E. (Agril.) or B.Sc. (Hons.) in Agriculture/ Fisheries/Home Science / Horticulture/Community Science.
8.	Mathematics	04	B.Sc. with Mathematics as one of the major subjects.
9.	Microbiology	03	B.Sc. in Microbiology/ Biochemistry/ Agriculture/ Fisheries/ Forestry /Home Science/Community Science/ Biotechnology /Biology (Zoology and Botany with any other subject)/B.Sc. Horticulture/B.Tech. (Biotechnology).
10.**	M.Sc. Ag. (Biotechnology)	30	Bachelor's Degree in Agriculture/ Horticulture/ Forestry/ Fisheries Science/ Agriculture Biotechnology/B.Tech. Biotechnology from any Agriculture University.
11.	Plant Physiology	04	B.Sc. in Agriculture/ Horticulture/ Forestry.
12.	Physics	12	B.Sc. with Physics as one of the major subjects.
Veterinary Science Majors			
1.	Veterinary Anatomy	04	B.V.Sc. & A.H./B.V.Sc.
2.	Veterinary Gynaecology & Obstetrics	04	B.V.Sc. & A.H./B.V.Sc.
3.	Veterinary Public Health & Epidemiology	04	B.V.Sc. & A.H./B.V.Sc.
4.	Vety. Surgery & Radiology	08	B.V.Sc. & A.H./B.V.Sc.
5.	Veterinary Biochemistry	03	B.V.Sc. & A.H./B.V.Sc.
6.	Veterinary Medicine	04	B.V.Sc. & A.H./B.V.Sc.

7.	Veterinary Microbiology & Immunology	04	B.V.Sc. & A.H./B.V.Sc.
8.	Veterinary Parasitology	04	B.V.Sc. & A.H./B.V.Sc.
9.	Veterinary Pathology	04	B.V.Sc. & A.H./B.V.Sc.
10.	Veterinary Pharmacology & Toxicology	04	B.V.Sc. & A.H./B.V.Sc.
11.	Veterinary Physiology	04	B.V.Sc. & A.H./B.V.Sc.
12.	Veterinary and Animal Husbandry Extension	02	B.V.Sc. & A.H./B.V.Sc.
13.	Livestock Products Technology	04	B.V.Sc. & A.H./B.V.Sc.
14.	Livestock Production & Management	05	B.V.Sc. & A.H./B.V.Sc.
15.	Poultry Science	05	B.V.Sc. & A.H./B.V.Sc.
16.	Animal Nutrition	04	B.V.Sc. & A.H./B.V.Sc.
17.	Animal Genetics & Breeding	04	B.V.Sc. & A.H./B.V.Sc.
18.	Animal Biotechnology	02	B.V.Sc. & A.H./B.V.Sc.
Management Programmes			
***1.	MBA (Agribusiness)	32	Bachelor's and/or Master's degree in Agriculture, Agricultural Chemicals, Agricultural Engineering, Dairy Science/Technology, Fisheries, Food Science/Technology, Forestry, Horticulture, Veterinary Science, Home Science or B.Tech. (Biotechnology).
***2.	MBA	08	Bachelor's degree in any branch of Engineering/Technology from AICTE approved Institutions/ UGC approved Universities.
M.C.A. Programme			
***1.	MCA	24	BCA/B.Sc. with Mathematics from a recognized University/B.Sc. (Information Technology)/ B.Sc. Computer Science.

Candidates for Master's programme should refer para 22 for subject group code of Entrance Examination.

*****Self-Financing**

#30 percent of sanctioned seats are allotted to Other State candidates.

The candidate possessing above qualifications and fulfilling the conditions laid down hereunder shall have to qualify the written test and secure a place in the merit list so as to be eligible for admission:

(a) The candidate should have secured an OGPA of not less than 6.000/10.000 or 3.000/5.000 or 55% marks in aggregate in case of the Institutions/Universities where these scales are not applicable in the Bachelor's degree.

Note : The minium degree duration will be six semester for the candidates seeking admission in Agriculture & Home Science Majors who have studied only 3-year degree programme instead of 4-years.

* The students admitted in the programme of Agricultural Statistics/Statistics with qualifications B.Sc.(Ag.)/B.Sc. (Hons.) Ag. will be awarded M.Sc. (Agril. Statistics) degree and those admitted with B.Sc. degree (with Mathematics/Statistics as one of the major subjects) will be awarded M.Sc. (Statistics) degree.

** Admissions to DBT supported Master's programme (M.Sc. Agricultural Biotechnology) shall be made through online counseling from the list of qualified candidates received from DBT Regional Centre for Biotechnology, Faridabad, which is responsible for conducting Graduate Aptitude Test-Biotechnology (GAT-B) for admission to the above said programmes through out the country.

C. Undergraduate Programmes

S. No.	Name of Programmes	No. of seats		Minimum Eligibility Qualifications
		UA Domicile	Payment Seats	
1.	B.Sc. (Hons.) Agriculture	130	**26***	Intermediate Agriculture/Science with Mathematics or Biology or equivalent examination and should have obtained a minimum of 50% marks for General Category and 47.5 % for reserved categories (OBC, SC & ST).
2.	B.Sc. (Hons.) Community Science	70	**10***	Intermediate Agriculture/Science with Mathematics or Biology or equivalent examination and should have obtained a minimum of 50% marks for General Category and 47.5 % for reserved categories (OBC, SC & ST).

3.	B. V. Sc. & A.H.	62	**16***	Intermediate Science with Physics, Chemistry, Biology and English or equivalent examination and should have obtained a minimum of 50% marks for General Category and 47.5% for reserved categories (OBC, SC & ST) in aggregate in the subjects of Physics, Chemistry, Biology and English. **For Candidates educated abroad** The students who are educated abroad seeking admission in Veterinary colleges in India should has passed the subject of Physics, Chemistry, Biology or Biotechnology and English up to the 12th Standard level with 50% marks in aggregate of these subjects.
4.	B.F.Sc.	24	**04***	Intermediate Science with Biology or equivalent examination and should have obtained a minimum of 50% marks for General Category and 47.5 % for reserved categories (OBC, SC & ST).
5.	B.Tech. (Food Technology)**	30 (15 Seats UK +15 Seats Other State)	**Nil**	Intermediate Science with Physics, Chemistry, Mathematics (PCM)/Physics, Chemistry, Mathematics and Biology (PCMB) or equivalent examination and should have obtained a minimum of 50% marks for General Category and 47.5 % for reserved categories (OBC, SC & ST).
6.	B.Tech. Agril. Engg.	60	**Nil**	Pass 10+2 examination with Physics and Mathematics as compulsory subject alongwith one of the Chemistry/ Biotechnology/Biology/Technical Vocational subject/Computer Science/Information Technology / Informatics Practices/ Agriculture/ Engineering Graphics/Business Studies. Obtained atleast 45% marks (40% marks in case of candidates belonging to reserved category) in the above subject taken together.
7.	B.Tech. Civil Engg.	60	**Nil**	-do-
8.	B.Tech. Computer Engg.	60	**Nil**	-do-
9.	B.Tech. Elect. Engg.	60	**Nil**	-do-
10.	B.Tech. Electronics & Communication Engg.	45	**Nil**	-do-
11.	B.Tech. Mech. Engg.	60	**Nil**	-do-
12.	B.Tech. Industrial and Production Engg.	45	**Nil**	-do-
13.	B.Tech. Information Technology	45	**Nil**	-do-
14.	B.Tech. (Biotechnology)**	20	**#20** (10 Seats UK +10 Seats Other State)	Intermediate Science with Physics, Chemistry, Mathematics (PCM)/Physics, Chemistry and Biology (PCB)/Physics, Chemistry, Mathematics and Biology (PCMB) or equivalent examination. Obtained atleast 45% marks (40% marks in case of candidates belonging to reserved category) in the above subject taken together.

The candidate possessing above qualifications and fulfilling the conditions laid down hereunder shall have to qualify the written test and secure a place in merit list so as to be eligible for admission.
The candidate seeking admission to B.V.Sc. & A.H. or B.F.Sc. programme must compulsorily attempt **PCB paper (Code 1)** in Entrance Examination.
***Payment seats (Programme fee is applicable in addition to university routine fee)**
****Self-Financing; #**Admissions to **B.Tech. (Biotechnology)** total number of seats 40 (**20 seats** from **Joint Entrance Examination through the counseling carried out by Uttarakhand Technical University** and 20 seats shall be made through the GBPUAT, Pantnagar Entrance Examination.

13. Distribution of Seats

(i) All the sanctioned seats in Undergraduate and Postgraduate degree programmes (except MCA) shall be allotted to bonafide residents of Uttarakhand State. However, 50% payments seats for UG programmes will be reserved for other state candidates. If other state candidates for payment seats

are not available to fill up the seats, the same will be filled through bonafide residents of Uttarakhand and vice-versa. For payment seats, the candidates will have to pay programme-wise fee in addition to university routine fee as given below:

Programme	B.V.Sc. & A.H.	B.Sc. Ag.	B.Sc. Comm. Sc.	B.F.Sc.	B.Tech. Food Tech.	B.Tech. Biotech.
***Programme fee**	Rs. 4.0 lac per annum	Rs. 1.0 lac per annum	Rs. 50000 per annum	Rs. 50000 per annum	Rs. 1.0 lac per annum	Rs. 50000 per annum
***Total fee**	Programme fee + Univ. routine fee	Programme fee + Univ. routine Fee	Programme fee + Univ. routine fee	Programme fee + Univ. routine fee	Programme fee + Univ. routine fee	Programme fee + Univ. routine fee

(ii) Over and above the sanctioned seats, 30 percent of sanctioned seats (except B.V.Sc. & A.H.) are allotted to ICAR and 15% of sanctioned seats of B.V.Sc. & A.H. programme are allotted to VCI at Undergraduate level as per the conditions laid down by the ICAR/VCI for admitting candidates. Moreover 15% of the sanctioned seats of B.Tech. (Agricultural Engineering) are filled up through ICAR.

In Master's programme (except MCA, a self-financing programme) over and above the sanctioned seats, 30 percent of sanctioned seats are allotted to ICAR.

In M.Tech. programme (except Agricultural Engineering programmes) over and above the sanctioned seats, 30 percent of sanctioned seats are allotted to Other State candidates.

(iii) Admission for seats allotted to ICAR/VCI in UG and Masters' programmes shall be made through Entrance Examination conducted by the ICAR/VCI.

(iv) In case of MCA (self-financing) programme 50% of the sanctioned seats shall be filled by the candidates from the States other than Uttarakhand and 50% seats shall be filled by the Bonafide resident of Uttarakhand State through the entrance examination conducted by the University. In case seats of other State remain vacant; the same may be filled from the candidates of Uttarakhand State and vice-versa.

(v) In case of admission for **Masters' and Ph.D. in Agronomy and Plant Pathology** majors the sanctioned number of seats will be filled through University Entrance Examination and same number of seats will be filled through ICAR Entrance Examination.

(vi) In Ph.D. programmes (except Ph.D. in Management) over and above the sanctioned seats, 25 percent of sanctioned seats shall be filled from the other State candidates through the Entrance Examination conducted by the University. In case Other State candidates are not available to fill up these seats, the same may be filled up from Bonafide candidates of Uttarakhand and vice-versa. In the last round of counselling.

14. Reservations*

(a) Vertical Reservations

(i) The vertical reservation for the academic year 2022-2023 will be as under:

(i) OBC - 14% (ii) Scheduled Caste - 19%

(iii) Scheduled Tribes - 04%

(ii) The seats not filled through candidates of reserved categories in Ph.D. programmes only may be converted to General Category seats and filled up accordingly. The conversion of seats in Ph.D. programmes only shall be made through the counselling held in the II Semester of academic session 2022-2023 subject to the availability of vacant seats.

(iii) Only vertical reservation will be applicable for 50% payment seats of each UG programme which are reserved for bonafide residents of Uttarakhand. No horizontal reservation will be applicable for payment seats. The seats reserved for Other State candidates will be treated as general and no reservation will be applicable.

(b) Horizontal Reservations: Out of reservation applicable to different categories, the horizontal reservation in Undergraduate programmes only in these categories shall be as under:

(i)	Children of retired/killed or disabled Defence Personnel of Uttarakhand	2 %
(ii)	Children of Freedom Fighters of Uttarakhand	2 %
(iii)	Physically Handicapped of Uttarakhand having disability 40% or above	3 %
(iv)	**Women Candidates of Uttarakhand	30 %

* Reservation shall be implemented as per G.O. of Uttarakhand State.

** Women Candidates of Uttarakhand shall include girl candidates also.

(c) Over and above the sanctioned seats for General category, 10% seats will be allotted to the candidates belonging to EWS based on the merit in the Entrance Examination as per Uttarakhand Govt. Order.

(d) The candidates who have obtained qualifying degree from G.B. Pant University of Agriculture & Technology, Pantnagar shall be treated at par with the Bonafide residents of Uttarakhand for higher studies.

(e) Over and above the sanctioned seats, admission to the following sub-categories in Undergraduate programmes (except B. Tech.) shall be available as follows:

i	Children/Spouse of regular employees/Daily Wage Workers (240 days) of G.B. Pant University of Agriculture &Technology, Pantnagar	-	5% seats in each programme
ii.	ICAR Nominee	-	10% for Foreign Nationals who pay an Institutional Fee US$5000 per annum besides other fee.

iii. The son/daughter/spouse of the regular University employee, who died in harness, shall be given special consideration for admission in the first-degree programme on compassionate grounds subject to the maximum of 2% of the sanctioned seats in each programme (minimum of one seat in each programme) purely based on merit rank in the entrance examination. His/her admission will be subject to the condition that:

- He/She secures atleast marks upto cutoff point for admissions of the particular year and qualifies in General Category.
- He/She fulfills the minimum eligibility qualification for the programme, and
- The request for seeking admission on compassionate ground would be entertained within two years of the death of an employee of the University.
- His/Her admission is approved by the Vice-Chancellor.

iv. One seat each in every UG Programme (except B.Tech. programmes) shall be reserved for the wards of Kashmiri migrants/Kashmiri Pandits residing in Kashmir valley and wards of J & K residents. The Candidates shall be admitted based on merit in the entrance examination in respective categories subject to fulfilling the conditions laid down in 12-C.

Note: The University reserves the right to change the reservation pattern either on account of Govt. orders or on its own.

15. ADMISSION OF SPONSORED CANDIDATES

(a) Undergraduate Programmes		
(i)	Gram Vikas Adhikari Candidate Sponsored by Uttarakhand Govt.	5 Seats in B.Sc.Ag.
(ii)	In service candidates from Animal Husbandry department sponsored by the Govt. of Uttarakhand.	5 Seats in B.V.Sc. & A.H.
(iii)	Development and Extension Workers from Uttarakhand Fisheries Department (in service)	1 Seat in B.F.Sc.
(iv)	Seats reserved for candidates in Engineering courses nominated by M.H.R.D. Govt. of India.	As per notification of Uttarakhand Government.
(v)	Seats allotted by AICTE under PMSSS for students belonging to J & K State.	As per Govt. Allotted letter.
(vi)	In-service candidates of Pantnagar University / Farm	Admission of in-service Candidates of G.B. Pant University of Agriculture & Technology, Pantnagar/University Farm to Bachelor's degree programmes (except B. Tech.) shall be made as per rules subject to their having qualified the U.G. Entrance Examination and recommendation of the Dean of the College concerned.

(b) Post Graduate Programmes	
Foreign National nominated by ICAR/ Govt. of India or Junior/Senior research fellowship Holders of UGC/ ICAR/ CSIR/DBT etc. and sponsored Staff candidates of G.B.P.U.A. &T. Pantnagar and Development Departments of State Govt. : **Note: (i) Admissions to above category shall not exceed the number of sanctioned seats.** (ii) Format for Forwarding of the Application Form Appendix – XII.	Over and above the sanctioned seats, two seats in each Master's and Ph.D. programmes shall be available to Foreign Nationals (Candidates) on Payment of an institutional fee of US$5000 per year subject to their fulfillment of eligibility qualifications laid down in Appendix – I (B). 25% seats for Ph.D. programmes (minimum one seat in each discipline) are to be filled through ICAR entrance examination AICE-SRF). *Four* seats are reserved in each Ph.D. major except Molecular Biology & Biotechnology for UGC/ CSIR/ICMR fellowship holders. In case of Ph.D. in Molecular Biology & Biotechnology major, two seats are reserved for DBT fellowship holders and two seats for UGC/CSIR/ICMR fellowship holders. Two seats in each Masters' and Ph.D. Major are reserved for the candidates sponsored by the G.B. Pant University of Agriculture and Technology, Pantnagar and Development Departments of State Government subject to the following conditions: **(a)** Applicants who have earned entitlement to fellowship based on National Selection (UGC/ICAR/CSIR/DBT/ICMR) and the sponsored staff candidates of GBPUAT, Pantnagar and Development Departments of State Govt. are not required to appear in the University Entrance Examination. They shall be admitted subject to fulfilment of minimum eligibility qualification as laid down in para **12 'A' or 'B'** of the Prospectus (Chapter II). The inter-se-merit of UGC/CSIR/ DBT/ICMR fellowship holders shall be determined based on academic rating of their past academic performance. However, for consideration of the admission under sanctioned seats as detailed in Para **12 'A' or 'B'** the applicants are advised to appear in the Entrance Examination.

	(b) No candidate who has failed to secure the minimum cut off marks fixed by the Admissions Committee in the Entrance Examination can be sponsored /nominated for admission in the University until he/she qualifies the Entrance Examination.

16. Mode of Admission

(a) Subjects & Scheme of Examination

(i) All candidates seeking admission to Ph.D. Programmes shall take subject matter test comprising 600 marks, which shall be administered programme wise as given in para 12 A. The question paper shall consist of objective type questions with 4 multiple choices and shall be of 3 hours duration.

(ii) (a) For all Masters' (except Physical & Life Sciences) and MCA programmes, the question paper will consist of 50 questions of Aptitude and 150 questions of subject matter. However, Life Sciences and Physical Sciences groups will consist of 50 questions of Aptitude and 200 questions of subject matter.The question paper will be objective type with multiple choices for each question in English language only.

(iii) There shall be one common Entrance Examination for admission to all Undergraduate Programmes. It shall be of three hours duration and shall consist of one question paper carrying 600 marks and would be of objective type with multiple choices. The bilingual question paper in English and Hindi will be supplied. There will be three groups of papers as detailed below:

PCB paper (Code 01): The candidate who has passed/ appeared in 10+2 examination with Physics, Chemistry and Biology stream shall have question paper consisting of questions of Mental Agility (30 questions), Physics (50 questions), Chemistry (50 questions) and Biology (70 questions). The candidate opting for this group can seek admission for degree course in Agriculture, Fisheries, Community Science, Veterinary Sciences, B.Tech. (Food Technology) and B.Tech. Biotech.

PCM paper (Code 02): The candidate who has passed/ appeared in 10+2 examination with Physics, Chemistry and Mathematics stream shall have question paper consisting of questions of Mental Agility (30 questions), Physics (50 questions), Chemistry (50 questions) and Mathematics (70 questions). The candidate opting for this group can seek admission for degree course in Agriculture, Community Science, B.Tech. (Food Technology) and B.Tech. Biotech..

PCA paper (Code 03): The candidate who has passed/ appeared in 10+2 examination with Agriculture stream shall have question paper consisting of questions of Mental Agility (30 questions), Physics (50 questions), Chemistry (50 questions) and Agriculture (70 questions). The candidate opting for this group can seek admission for degree course in Agriculture and Community Science.

The candidate having Physics, Chemistry, Mathematics and Biology subjects at his/her 10+2 level will have to indicate his/her choice of the group of paper for Entrance Examination in the Application Form. These candidates can either opt for PCB paper (Code 1) or PCM paper (Code 2). They can seek admission for degree programme as per their qualification and group of paper in the entrance examination.

Note:(1) FOR ALL THE PROGRAMMES VIZ Ph.D., MASTERS' AND UNDERGRADUATES 3.0 MARKS WILL BE AWARDED FOR EACH CORRECT ANSWER AND 1.0 MARK WILL BE DEDUCTED FOR EACH WRONG ANSWER ATTEMPTED BY THE CANDIDATE.

(2) USE OF ELECTRONIC EQUIPMENT SUCH AS CALCULATOR, LOG TABLE AND MOBILE PHONE ETC. IN THE EXAMINATION HALL IS STRICTLY PROHIBITED.

16. (b) Basis of Selection for Admission

(i) The Admissions Committee will decide the cutoff marks for the academic year for qualifying the entrance examination after declaration of Rank-wise list of the candidates appeared in the Entrance Examination conducted by the University.

(ii) For Ph.D. Programmes if the marks secured by two or more candidates are the same, the merit shall be decided on the basis of marks secured in the qualifying examination. For Masters' programmes in the event of two or more candidates securing equal marks, the merit shall be decided on the basis of marks secured in the Aptitude Test and then qualifying examination. For Undergraduate programmes in the event of two or more candidates securing equal marks, the merit shall be decided on the basis of marks secured in Mental Agility then Physics, Chemistry and thereafter marks secured in the qualifying examination. In the event of tie again, a candidate with higher in age would be rated higher in merit.

16. (c) Counselling

(i) Online counselling for all programmes (UG/Masters'/MCA/M.Tech./Ph,D.) will be carried out after declaration of results. Dates of different rounds of counselling will be decided keeping in view the

date of commencement of first semester of academic session 2020-21 and will be uploaded on the website **(www.gbpuat.ac.in)** of the university along with the list of eligible candidates for different rounds of counselling. The candidates are advised to see regularly the website of the University for counselling dates. No separate letter or Email for any round of counselling will be sent to any candidate.

(ii) Candidates seeking admission to M.Tech. programmes based on OGPA/percentage of marks of B.Tech. will be called in II and subsequent rounds (if needed) of counselling only.

(iii) No letter, E-mail, fax or telegram enquiring about the result of the Entrance Examination will be entertained.

(iv) The candidates coming for document verification in the university should bring alongwith them the following documents for checking:

- Seat allotment letter
- Receipt of counselling fee
- Receipt of programme fee
- Self Attested photocopies of High School Certificate and Marks-Sheet alongwith the originals.
- Self Attested photocopies of Intermediate Certificate and Marks-Sheet alongwith the originals.
- Self Attested photocopies of Marks-Sheet and Certificate of any other higher degree qualifications that he/she may possess alongwith the originals.
- Domicile Certificate of Uttarakhand State issued by the competent authority after 20 Nov. 2001.
- Rural/Sports/Agriculturists Weightage Certificate, in original, as given in Prospectus 2021-2022, if applicable.
- Character and Conduct Certificate in original from the Head of the Institution last attended.
- Five-passport size photographs with name and Roll Number written on the back.
- Original copy of the Valid Category Certificate.
- Solemn Voluntary declaration form (**Appendix – IV**).
- A Gap Certificate accounting for discontinuity of more than three months after leaving the Institution last attended.(Those employed should bring certificate from employer, others should produce a sworn affidavit duly notarized on stamp paper of Rs.10/- + Notary stamps Rs.10/- (total value Rs.20/).
- The Migration/Transfer Certificate in original to be submitted within three months of the admission.
- On the directives of the Hon'ble Supreme Court an affidavit duly signed by the candidate and his/her parents/guardian for non-participation in ragging on a non-judicial stamp paper of Rs. 10.00 duly notarized (**Appendix –V & VI**).
- Medical fitness certificate in the prescribed format (**Appendix-II)**.

Note: Candidates seeking admission to Masters' and Ph.D. programmes must submit final year Mark-Sheet/PDC (indicating percentage of marks) at the time of counselling. Without the above documents, their candidature will not be considered for counselling.

(v) Candidate not fulfilling the eligibility condition(s) at the time of Counselling and not declared medically fit will not be granted admission.

(vi) The candidate once admitted in a programme as per his/her merit on availability of seat at the time of counselling will not stake any claim for change of programme after counselling is over.

17. Medical Examination

All the admissions are subject to the medical and physical fitness as per medical standards prescribed in **Appendix-III**. The medical fitness certificate must be obtained from a Medical Officer of any Government Hospital including G.B. Pant University Hospital on the format given at **Appendix II**.

18. Admit Cards

Admit Card for the Entrance Examination shall be downloaded by the candidate himself/herself from the University website **(www.gbpuat.ac.in)**. No separate admit cards will be issued by the Controller of Examination, G.B. Pant University of Agriculture & Technology, Pantnagar.

19. Age Limit

Maximum age limit for admission to all Undergraduate programmes except B.Tech. degree programmes is 25 years. There shall be relaxation of maximum age by five years for SC/ST/OBC candidates. This limit may be relaxed in case of sponsored/nominated candidates. This regulation shall not be applicable to the candidates seeking admission to P.G. programmes. The age will be calculated on 31 December of the corresponding Academic Year.

For B.V.Sc. & A.H. degree programme the minimum age limit is 17 years and the maximum age of 25 years. There shall be relaxation of maximum age by five years for SC/ST/OBC candidates. The age will be calculated on 31 December of the corresponding Academic Year.

20. Refusal of Admission

(a) The Vice-Chancellor of the University reserves the right to refuse the admission of any candidate despite of his/her fulfilment of the academic requirements for admission on the basis of Entrance Examination, for reasons to be recorded in writing, whose admission in the opinion of the Vice-Chancellor shall not be in the best interest of the University. The decision of the Vice-Chancellor shall be final and legally binding on the candidate.

(b) The students who have been permanently dropped or temporarily dismissed from this University either on account of acts of indiscipline, or those who have been debarred from seeking admission from this University shall not be allowed to appear in the Entrance Examination, or seek admission as a sponsored/ nominated candidate. If such a candidate appears in the Entrance Examination by concealing the facts or due to oversight on the part of Admission Cell, the candidature of such a candidate shall be rejected.

The students who are/were dropped from a degree programme of the University on account of poor academic performance shall be allowed to take admission afresh in other degree programmes by clearing the entrance examination as in case of others. However, they will not be allowed to take admission in the same programme. In case they are again dropped on account of poor academic performance they will not be allowed to take admission in any programme of the University in future.

(c) The candidate found using unfair means in the Entrance Examination of this University shall be rejected and further such candidate shall also be debarred from appearing in the Entrance Examination in future.

(d) It is the responsibility of the candidate to furnish full and correct information on the application form. Any admission made on the basis of wrong or concealed information supplied by the candidate or due to any over-sight or error on the part of Admission Cell and detected subsequently the admission or joining of the candidate, would be cancelled at the cost and risk of the candidate.

21. Category

(a) The list of categories/sub-categories (for office use only) is given in the following table. Once a candidate has chosen his/her category, he/she shall have no option to change it subsequently. If a candidate does not mention the category and or fails to produce valid certificate in support of his/her category/ subcategory, he/she will be considered under general category only.

(i) U.G. Programmes

Category/sub-category		Abbreviation	Code Number			
			Without Weightage	With Rural Weightage	With Sports Weightage	With Agriculturists Weightage
GENERAL						
1.	Uttarakhand General	UKG	1100	1101	1102	1103
2.	Physically Challenged of Uttarakhand	UKPH	1160	-	-	-
3.	Children of Retired/Killed/Disabled Defence Personnel of Uttarakhand	UKDP	1170	1171	1172	1173
4.	Children of Freedom Fighters of Uttarakhand	UKFF	1180	1181	1182	1183
OTHER BACKWARD CLASSES OF UTTARAKHAND						
5.	Uttarakhand Backward Classes	UKBC	1200	1201	1202	1203
6.	Physically Handicapped of Backward Classes of Uttarakhand	UKPHBC	1260	-	-	-
7.	Children of Retried/Killed/Disabled Defence Personnel and belong to Backward Classes of Uttarakhand	UKDPBC	1270	1271	1272	1273
8.	Children of Freedom Fighters of Backward Classes	UKFFBC	1280	1281	1282	1283

SCHEDULED CASTES OF UTTARAKHAND						
9.	Uttarakhand Scheduled Castes	UKSC	1300	1301	1302	1303
10.	Physically Handicapped of Scheduled Castes of Uttarakhand	UKPHSC	1360	-	-	-
11.	Children of Retired/Killed/Disabled Defence Personnel and belong to Scheduled Castes of Uttarakhand	UKDPSC	1370	1371	1372	1373
12.	Children of Freedom Fighters of Scheduled Castes of Uttarakhand	UKFFSC	1380	1381	1382	1383
SCHEDULED TRIBES OF UTTARAKHAND						
13.	Uttarakhand Scheduled Tribes	UKST	1400	1401	1402	1403
14.	Physically Handicapped of Scheduled Tribes of Uttarakhand	UKPHST	1460	-	-	-
15.	Children of Retired/Killed/Disabled Defence Personnel and belong to Scheduled Tribes of Uttarakhand	UKDPST	1470	1471	1472	1473
16.	Children of Freedom Fighters of Scheduled Tribes of Uttarakhand	UKFFST	1480	1481	1482	1483
17.	Wards of Kashmiri migrants/Kashmiri Pandits residing in Kashmir valley	WKM	2100			
18.	Wards of J & K Residents	WJKR	2200			
19.	University Employee	UE	4000			
20.	In service candidates from Animal Husbandry department sponsored by the Govt. of Uttarakhand	UKAHDS	5000			
21.	Other States	OS	3000			

Irrespective of the option for one of the categories above, the wards of regular Employee of G.B. Pant University of Agriculture & Technology, Pantnagar are advised to indicate at the appropriate place in the online application form that they are wards of regular Employee/ Daily Wage Workers (240 days) of the University.

(ii) Masters' Programme

Category	Abbreviation	Code Number		
		Without Weightage	With NCC weightage	With Sports Weightage
Uttarakhand General	UKG	1100	1101	1102
Uttarakhand Backward Classes	UKBC	1200	1201	1202
Uttarakhand Scheduled Castes	UKSC	1300	1301	1302
Uttarakhand Scheduled Tribes	UKST	1400	1401	1402

(iii) M.C.A., M.Tech. and Ph.D. Programme

Category	Abbreviation	Code Number
Uttarakhand General	UKG	1100
Uttarakhand Backward Classes	UKBC	1200
Uttarakhand Scheduled Castes	UKSC	1300
Uttarakhand Scheduled Tribes	UKST	1400
Other States	OS	3000

(b) (I) Rural Weightage {For U.G. (except B.Tech.) Programmes Only}

A weightage of 2 percent of the marks obtained in the Entrance Examination in determining the merit shall be allowed to the candidates belonging to rural areas of Uttarakhand. The rural area weightage will be allowed for determining the Inter-se-merit of the candidate only and not for acquiring eligibility. A candidate who has passed the qualifying examination from an Intermediate College situated in a rural area of Uttarakhand shall be deemed to be a candidate belonging to a rural area. A certificate to this effect shall have to be submitted in original alongwith application form by the candidate from the Principal of the College concerned duly countersigned by District Inspector of Schools or the District Magistrate of the District on the prescribed Certificate available in this Prospectus (**Appendix-VII**). In case of a student passing out from Inter College/Campus School/G.G.I.C., Pantnagar, Certificate for Rural Area weightage may be given by the respective Principal only.

(b) (II) Agriculturists Weightage {For U.G. (except B.Tech.) Programmes Only}

A weightage of 2 percent of the marks obtained in the Entrance Examination shall be given to the qualified candidate who is a farmer's Son/Daughter/Brother/ Sister/Grand Son/Grand Daughter subject to production of certificate **(Appendix-VII)** from competent authority for having land in Uttarakhand under cultivation by himself/herself, his/her brother, his/her father, his/her mother, his/her grand father (paternal), his/her grand mother (paternal).

(b) (III) Sports Weightage {For U.G. (except B.Tech.) and Masters' Programmes Only}

A weightage of 2 percent of the marks obtained in the Entrance Examination shall be given to the sports men/women candidates. This weightage shall, however be given only to those sports men/women candidates who have played at the Inter-varsity/ State level (Junior /Senior level) [**during the study of XI-XII classes for admission to UG programmes and during UG classes for admission to Masters' programmes**] as the case may be or above these levels, as evidenced by the certificate (**Appendix –VII**) issued by these bodies.

(c) NCC Weightage to 'B' Certificate Holder (For Masters' Degree Programmes Only)

A weightage of 2 percent of the marks obtained in the Entrance Examination shall be given to the qualified candidates who have NCC 'B' certificate.

Note: 1. A candidate seeking admission in U.G. Programme can claim only one weightage either Rural, Sports or Agriculturists.

2. A candidate seeking admission to Maters' Programmes can claim only one weightage either Sports or NCC.

22. Subject Groups for Master's Programme

For admission to Masters' programme of the University, the candidate shall have to specify the group of paper in the application form based on qualifying examination mentioned against the programme. The groups with their code number are given below:

Sl. No.	If you Posses a Degree of	Subject Group & Group Code for Entrance Examination	
1.	B.Sc.Ag./B.Sc.Ag. & A.H.	Agriculture	01
2.	B.Sc. (Horticulture)	Horticulture	03
3.	B.Sc. (Forestry)	Forestry	04
4.	B.F.Sc.	Fisheries	05
5.	(i) B.Sc. in Home Science (ii) B.Sc. in Home Economics (iii) B.Sc. in Family & Community Sciences	Home Science	06
6.	B.V.Sc. & A.H./B.V.Sc.	Vety. Sciences	07
7.	(i) B.Sc. (Dairy Technology) (ii) B.Sc. (Food Technology) (iii) B.Tech. (Dairy Tech.) (iv) B.Tech. (Food Tech. /Food Sc.) (v) B.Tech.(Food Engg.)	Food Science and Dairy Technology	08
8.	(i) B.Sc. (Biochemistry) (ii) B.Sc. (Microbiology) (iii) B.Sc. with Chemistry as one of the major subjects. (iv) B.Sc. (Microbiology with Chemistry) (v) B.Sc. (Zoology, Botany and Chemistry) (vi) B.Sc. Biology (Zoology and Botany with any other subject) (vii) B.Sc. with Environmental Science/Environmental Biology as one of the major subjects. (viii) B.Sc. Botany as one of the major subjects. (ix) B.Sc. Biotechnology. (x) B.Sc. Chemistry, Botany & Food Science & Quality Control.	Life Sciences	09
9.	(i) B.Sc. (Physics, Chemistry and Mathematics) (ii) B.Sc. with Statistics as one of the major subjects (iii) B.Sc. with Physics as one of the major subjects (iv) B.Sc. with Chemistry as one of the major subjects (v) B.Sc. with Mathematics as one of the major subjects	Physical Sciences	10

10.	(i) BCA (ii) B.Sc. with Mathematics as one of the major subjects (iii) B.Sc. (Information Technology) (iv) B.Sc. Computer Science	MCA	11

23. Syllabus

The syllabus for undergraduate programmes is given in **Appendix VIII**. For postgraduate programmes this will be at par with the standard course content of the subject approved by the UGC/ICAR for Indian Universities. However, the syllabus for Life Sciences & Physical Sciences is given at **Appendix-IX** and MCA is given at **Appendix X.**

24. Registration of fresh students

Registration for the first semester of the year of a degree programme is a part of admission procedure and shall be governed by the admission rules. Admission of new students admitted through Entrance Examination failing to register in the prescribed manner within seven days from the initial date of Registration will be cancelled.

25. Normal and Maximum Duration of the Programmes

The normal and maximum duration of various degree programmes is as per details given below. A student is required to complete all his/her degree requirements within the specified period, failing which he/she may be rendered ineligible for award of the degree.

S. No.	Degree	Normal Duration	Maximum Duration
1.	B.Sc. Agriculture	8 Semesters	12 Semesters
2.	B.V.Sc. & A.H.	5 ½ year (including a compulsory internship of "One year" duration)	9 academic years (including Internship)
3.	B.Sc. (Hons.) Community Science	8 Semesters	12 Semesters
4.	B.F.Sc.	8 Semesters	12 Semesters
5.	B.Sc. (Forestry)	8 Semesters	12 Semesters
6.	B.Sc. Horticulture	8 Semesters	12 Semesters
7.	B.Tech. Food Technology	8 Semesters	12 Semesters
8.	B.Tech.	8 Semesters	12 Semesters
9.	B.Tech. For Diploma holders and B.Sc. (Maths) degree holders to be admitted to 2nd year level.	6 Semesters	9 Semesters
10.	Master's degree in various majors except MCA	4 Semesters	8 Semesters
11.	MCA	6 Semesters	9 Semesters
12.	Ph.D. degree in various majors	6 Semesters	12 Semesters

26. Fee and Refund of fee at the time of Counselling/Admissions

Information regarding each component of the fee, deposits and other charges payable by the students admitted to the University for pursuing a course/programme will be uploaded on the website of the university before online counselling.

All the candidates eligible for counselling for admission to various degree programmes (except MCA programme) shall have to deposit counselling fee of Rs.500/- (non-refundable) online before filling their choices for different programmes. In respect of MCA programme (self-financing) a non-refundable counselling fee of Rs. 2000.00 shall have to be deposited by the candidate online.

The total amount of University fee shall be paid by a candidate online through the website of the university after allotment of seat.

If the candidate fails to register within the stipulated period after document verification, his/her admission will stand cancelled automatically and the seat allotted to him/her will automatically be camcelled and go to the next round of counselling. **The fee deposited by the candidate will be refunded as per University rules.**

The total amount of University fee shall be paid by a candidate before issuing the ID number. The amount of University fee to be deposited at time of counselling may be seen from the University website.

G.B. PANT UNIVERSITY OF AGRICULTURE & TECHNOLOGY
PANTNAGAR, DISTT. U.S.NAGAR (UTTARAKHAND)
OFFICE OF THE REGISTRAR

No. R/2322 Dated : May 29 ,2020

OFFICE ORDER

As per approval of Academic Council meeting 389th vide item no. 19 held on 24.02.2020 , UGC guidelines will be followed for refund of fees in case where student leave the University before or after registration in I semester. The guidelines are given below:-

1- For extant as well as future grievances from academic session 2019-20, the refund of fees remitted by the students be done as per UGC Notification on "Refund of Fees and Non-Retention of Original Certificates" dated October, 2018 issued by the Secretary UGC, Reproduced below:-

"If a student chooses to withdraw from the programme of study in which he/she is enrolled, the institution concerned shall follow the following five tier system for the refund of fees remitted by the student.

S.No.	Percentage of Refund of fees*	Point of time when notice of withdrawal of admission is received in the HEI
1.	100%	15 Days or more before the formally-notified last date of admission.
2.	90%	Less than 15 days before the formally-notified last date of admission.
3.	80%	15 days or less after the formally-notified last date of admission.
4.	50%	30 days or less, but more than 15 days, after formally-notified last date of admission.
5.	00%	More than 30 days after formally-notified last date of admission.

Notice: *Caution money and security deposit, which is not part of the fee chargeable, shall be refunded in full.

In case of (1) in the table above, the HEI (Higher Education Institution) concerned shall deduct an amount not more than 5% of the fees paid by the student, subject to a maximum of Rs. 5,000/- as processing charges from the refundable amount.

Fee shall be refunded by all HEIs to an eligible student within fifteen days from the date of receiving a writer application from him/her in this regard."

2- The advance fee (presently Rs. 5000) deposited by a student who participated in the Counseling process for admission but was not allotted a seat in any programme/branch, will be returned to him/her.
3- As far as food advance is concerned, it will be refunded full in case the student did not register at all. But if the student leaves the University after registration, the food advance will be refunded after deducting the outstanding food bill(s).
4- All students seeking withdrawal from the University after registration and allotment of hostel will have to submit "No Dues" for getting refund of fee.
5- The above provisions will be applicable to all students/candidates who were allotted seat any programme during counseling.
6- All earlier orders/rules on the matter of refund of fees will be treated as amended to the above extent.

REGISTRAR

CC:-
1- All Deans
2- Comptroller
3- All Hostel Wardens
4- Dy. Registrar/Asstt. Registrar/ All Staff of Registrar Office.
5- P.A. to V.C. for information .
6- Coordinator Admissions.

Appendix-I A

ADMISSION CRITERIA FOR CANDIDATES ADMITTED THROUGH ALL INDIA ENTRANCE EXAMINATION CONDUCTED BY ICAR/VCI

The minimum eligibility qualification, Group of papers, Scheme for conduct of examination and minimum age for the candidates admitted though ICAR/VCI will be same as approved by these bodies and published in their Prospectus.

Appendix-I B

MINIMUM ELIGIBILITY QUALIFICATIONS FOR CANDIDATES SPONSORED/ NOMINATED BY THE GOVT. OF INDIA/STATE GOVT. OF UTTARAKHAND AT UNDERGRADUATE LEVEL AND STAFF CANDIDATES OF GBPUA&T, PANTNAGAR/DEVELOPMENT DEPARTMENTS OF STATE GOVT./G.O.I. AT POST-GRADUATE LEVEL AND CANDIDATES COMING THROUGH GATE AND ALL INDIA TEST CONDUCTED BY THE CENTRAL AGENCIES.

A. Undergraduate Programmes

I. Bachelor of Science Agriculture

(i) Intermediate Agriculture/Science with Mathematics or Biology or equivalent examination with First class followed by First Class in High School or equivalent examination.

OR

(ii) Intermediate Agriculture/Science with Mathematics or Biology or equivalent examination with atleast 65% marks and 55% marks in High School or equivalent examination.

(iii) For Village Development Officer nominated by Uttarakhand Government.

1. 55% marks in Intermediate Science/Agriculture & High School or equivalent examinations.
2. A pass in two years Village Level Worker Diploma course.
3. Five years field experience as Village Development Officer or equivalent or in a higher capacity.

II. Bachelor of Veterinary Science and Animal Husbandry

(i) The minimum eligibility qualifications will be the same as prescribed for other candidates seeking admission through the Entrance Examination. The candidates have to appear in the Entrance Examination with PCB paper code-1 and shall have to qualify the written test as given in **Para 12 C**.

(ii) **For Candidates educated abroad**

The students who are educated abroad seeking admission in Veterinary colleges in India should has passed the subject of Physics, Chemistry, Biology or Biotechnology and English up to the 12th Standard level with 50% marks in aggregate of these subjects.

III. Bachelor of Fisheries Science

(i) Intermediate Science with Biology or equivalent examination with First Division followed by First Division in High School or equivalent examination.

OR

(ii) Intermediate Science with Biology or equivalent examination with atleast 65% marks and 55% marks in High School or equivalent examination.

(iii) For In-service candidates nominated by Fisheries Department of Uttarakhand Govt.

Intermediate Science or equivalent Examination with Biology with atleast 55% marks in High School and Intermediate examination both.

IV. Bachelor of Science (Community Science)

(i) Intermediate Science/Agriculture or equivalent examination with First class followed by First Class in High School or equivalent examination.

OR

(ii) Intermediate Science/Agriculture or equivalent examination with at least 65% marks followed by 55% marks in High School or equivalent examination.

V. Bachelor of Technology (Food Technology)

(i) Intermediate Science (10+2) examination or its equivalent with Physics, Chemistry and Mathematics (PCM)/Physics, Chemistry, Mathermatics and Biology (PCMB) with first class followed by First Class in High School or equivalent examination.

OR

(ii) Intermediate Science (10+2) examination or its equivalent with Physics, Chemistry and Mathematics (PCM)/Physics, Chemistry, Mathermatics and Biology (PCMB) with at least 65% marks and 55% marks in High School or equivalent examination.

VI. Bachelor of Technology Programmes

(A) Sponsored and nominee candidate of State Govt./Govt. of India

60% marks in aggregate in any one of the following examination with atleast 45% marks in High School or equivalent examination.

(i) Intermediate Science (10+2) with Physics and Mathematics with any one optional subject i.e. Chemistry, Biotechnology, Computer Science and Biology.

OR

(ii) Pre-professional with Physics, Chemistry and Mathematics.

OR

(iii) First year of the three years degree course with Physics, Chemistry and Mathematics provided it is a University examination.

(B) Diploma holders for admission to 2nd year of B.Tech. degree programmes:

Admissions to 2nd year of B.Tech. degree programmes for the Diploma Holders shall be made on the basis of the merit list of the entrance examination to be conducted as per the Uttarakhand Government policy (as per G.O.No. 187/XXIV(8)/2005-37/2004).

Eligibility criteria for such category of candidates are as under:

Diploma in any branch of engineering with a minimum of 60% aggregate marks and minimum three years of institutional study after High School or equivalent. Diploma holders in Agricultural Engineering are entitled to admission in B.Tech. Agricultural Engineering only.

(C) B.Sc. (Maths) degree holders seeking admission to 2nd year B.Tech. degree programmes:

Admissions to 2nd year of B.Tech. degree programmes for B.Sc. (Maths) degree holder shall be made on the basis of the merit list of the entrance examination to be conducted as per the Uttarakhand Government policy.

Eligibility criteria for such category of candidates are as under:

B.Sc. (Maths) degree with a minimum of 60% marks (aggregate) and minimum of three years of institutional study after Intermediate/equivalent.

(D) Kashmiri Migrant and Reserved Seats for residents of J&K and North East States.

Admission against reserved seats for Kashmiri Migrant for I year of B.Tech. progremme, shall be made by SCBUK/UTU, Dehradun or as per the latest Uttarakhand Government Policy.

Candidates seeking admission against reserved seats for residents of J&K and North East States for Ist year of B.Tech. programme, should contact the Director, Technical Education, House No.-143, Vasant Vihar, Dehradun (Uttarakhand).

B. Postgraduate Programmes

I. Masters' Programmes

The eligibility for sponsored candidates will be the same as prescribed for other candidates seeking admission through the Entrance Examination. Candidates should have two years field/teaching/ research experience in the related field on the last date of submission of completed application form. The candidate should have secured at least 50% marks in aggregate or an OGPA of 6.000/10.000 or 3.000/5.000 at Bachelor's level. Further, a relaxation of 0.5% mark per year but not more than 2% marks under any circumstance, for every one-year extra applaudable service after two years of service in the University/Institution shall also be given.

II. Ph.D. Programmes

The eligibility for sponsored candidates will be the same as prescribed for other candidates seeking admission through the Entrance Examination. Candidates should have two years field/teaching/ research experience in the related field on the last date of submission of completed application form. The candidate should have secured at least 50% marks in aggregate or an OGPA of 6.000/10.000 or 3.000/5.000 at Bachelor's level and 55% marks in aggregate or 6.500/10.000 or 4.000/5.000 at Master's level. Further, a relaxation of 0.5% mark per year but not more than 2% marks under any circumstance, for every one-year extra applaudable service after two years of service in the University/Institution shall also be given.

Appendix-II

FORMAT FOR MEDICAL CERTIFICATE

(FROM A MEDICAL OFFICER OF A GOVT. HOSPITAL/PANT UNIVERSITY HOSPITAL)

Name of Candidate:					Age:		Sex:	
Roll No.:		Category:		Subcategory:				
Merit Position:		Father's Name:						
(To be filled in by the candidate)								

L.T.			M.I.	V I S I O N	Colour Vision
Height	Weight	Chest	Abdomen		Without glass
					With glass

History				
	Operation Seizures	Kock's Asthma	Colic's Piles	BP Diabetes
E X A M I N	Pulse	Tonsil	DNS	Hernia
	Pallor	L Nodes	CSOM	Hydrocele
A T I O N S	Cardiovascular		CNS	
	Respiratory		GIT	
	Genitourinary		Others	

Is the candidate physically handicapped : Yes/ No

If yes. Type and extent of handicap (Please write) : Type –I: One leg or hand defective

Type _____ Type –II: One leg missing

Extent _____ % Type – III One hand missing

Any other type of handicap (Please specify) :

Any other finding:

Final result. (Fit/Unfit) .....based on the medical standards given in Appendix III of the Prospectus (overleaf) for the purpose of Admission.

Signature of Candidate

Signature of Medical Officer
(with official stamp)

Date:

Registration No.:

Appendix-III

MEDICAL STANDARDS

1. **General Requirement**

   The candidate should posses good general physique and should be free from any infectious or contagious disease. He/She should be free from any physical or mental illness or defect likely to interfere with the training in the University.

2. **Heart and lungs:** No significant abnormality should be present.

3. **Hernia, Hydrocele:** There should be no hernia or hydrocele. If present corrected before admission.

4. **Vision:**

   (a) Normal without glasses. Where defective, it must be corrected to 6/9 in better eye and 6/12 in the other eye.

   (b) There should be no colour blindness for major colours.

5. **Hearing:** Normal in the both ears. Where defective, it must be corrected before hand.

6. **Speech:** There should be no major speech defects.

7. Following categories of physically handicapped candidates (having disability 40% or above) shall be eligible for admission to the various courses as shown against each **under the Physically Handicapped category.**

   (1) One leg or hand defective: B.Sc.Ag./M.Sc.Ag./M.Sc. Agricultural Extension & Communication and Food Technology.

   (2) One leg (defective or missing): Mechanical/Electrical/Electronics & Communication/ Computer/ Production Engineering/Food Technology/B.Sc. (Home Science), M.Tech. Design and Production Engineering, Thermal Science/Electrical Energy System and M.Sc. in Home Science.

   (3) One hand (defective or missing): Civil/Mechanical/Production Engineering and B.Sc. Home Science, M.Tech. in Hydraulic Engineering/Soil Mechanics & Foundation Engineering/Structural Engineering/ Design and Production Engineering/Thermal Science and M.Sc. Home Science.

   The candidate claiming for above benefit should submit alongwith application form a certificate from Chief Medical Officer of the District certifying the extent of Physical Handicap.

Note:

1. The candidates are well advised to set themselves checked up for any defect and get the same rectified before taking admission to avoid rejection.

Appendix-IV

SOLEMN VOLUNTARY DECLARATION

(All Freshmen shall be required to sign this solemn voluntary declaration prescribed as under by the University)

I ….....……..Roll No.....admitted to ..... degree programme of the G.B. Pant University of Agriculture & Technology, Pantnagar hereby affirm:

1. That I firmly believe in the basic philosophy outlined in paragraph 11.75 of the Second Education Commission, particularly that quoted below:
   "A University or a College is an academic fellowship of equals where things can be discussed and decided reasonably by the joint committees of teachers and students which we have recommended have this purpose specifically in view. These should be fully utilized to ascertain and redress the genuine difficulties of student. What binds together students and teachers is the deep and creative partnership in the sharing of common interest, mutual regard & sense of values and working together for their main purpose, which is the pursuit of knowledge and discovery. Any one who is not committed to this philosophy or prepared to honour it has really no place in an institution of higher education".
2. That in any consequence, I believe that all grievances, disputes and problems of the students should be settled by constitutional means, such as approach to the Advisor, Warden, Chief Warden, Dean, Vice-Chancellor or other individuals concerned or by raising them in the relevant committees, such as Central Food Advisory Committee, Professional Societies, Cultural Societies, etc. or by reference to the Board of Management, Chancellor or the State Govt. or if all other means fail by having recourse to Court of justice.
3. That I, further believe that under no circumstances, there is need or justification for any defiance of the Rules and Regulations of the University, show of force, unruly demonstration, coercion, violence or any other means forming part of the so called direct action. I promise that I shall never have recourse to and unconstitutional means.
4. That I, further believe that under no circumstances, there is justification for any student approaching any outsider, may be the agitators from the Universities, politicians or disgruntled individuals not concerned with the affairs of the University. All matters should be settled by those concerned with the affairs of the University such as the students and staff of the University, guardians of the students, members of the Board of Management, the State Government, Chancellor, etc. I shall accordingly refrain from approaching any outside element not concerned with affairs of the University.
5. That, I shall attend my classes and participate in other activities of the University according to the programme, irrespective of the fact whether my other colleagues do so or not and that I shall do so even in the face of intimidation by any of them.
6. That, I further declare that any activity/travelling connected with studies/courses/project etc. will be entirely on my risk and responsibility and in case of accident or mishap the University or any of the functionary will not be responsible for that.
7. I also affirm that I shall abide by the word and spirit of the above declaration and further undertake that if, at any time I am found indulging in any such activity I may be dismissed from the University.

Guardian's Signature	Student's Signature .....
Name in Block Letters.....	Name in Block Letters .....
Place	Place .....
Date.....	Date .....

Appendix-V

AFFIDAVIT BY THE STUDENT FOR NON PARTICIPATION IN RAGGING

I. *(full name of student with admission/registration/enrolment number)* s/o d/o of Mr./Mrs./Ms. _____having been admitted to_____*(name of the institution)*_____, have received a copy of the UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009, (hereinafter called the "Regulations") carefully read and fully understood the provisions contained in the said Regulations.

2. I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.
3. I have also, in particular, perused clause 7 and clause 9.1 of the Regulations and am fully aware of the penal and administrative action that is liable to be taken against me in case I am found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.
1. I hereby solemnly aver and undertake that:
   (a) I will not indulge in any behaviour or act that may be constituted as ragging under clause 3 of the Regulations.
   (b) I will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 3 of the Regulations.
2. I hereby affirm that, if found guilty of ragging, I am liable for punishment according to clause 9.1 of the Regulations, without prejudice to any other criminal action that may be taken against me under any penal law or any penal law or any law for the time being in force.
3. I hereby declare that I have not been expelled or debarred from admission in any institution in the country on account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, I am aware that my admission is liable to be cancelled.

Declared this _____day of _____month of _____year.

_____
Signature of Deponent

Name .....

VERIFICATION

Verify that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is false and nothing has been concealed or misstated therein.

Verified at ____(place)____ on this the __(day)__ of __(month)__, ___(year)____

_____
Signature of Deponent

Solemnly affirmed and signed in my presence on this the __(day)__ of __(month)__, __(year)__ after reading the contents of this affidavit.

OATH COMISSIONER

Appendix-VI

AFFIDAVIT BY PARENT/GUARDIAN

I. Mr./Mrs./Ms._____*(full name of parent/guardian)*_____ father/mother/guardian of, *(full name of student with admission/registration/enrolment number)* having been admitted to _____*(name of the institution)*, have received a copy of the UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009, (hereinafter called the "Regulations") carefully read and fully understood the provisions contained in the said Regulations.

2. I have, in particular, perused clause 3 of the Regulations and am aware as to what constitutes ragging.
3. I have also, in particular, perused clause 7 and clause 9.1 of the Regulations and am fully aware of the penal and administrative action that is liable to be taken against ward in case he/she is found guilty of or abetting ragging, actively or passively, or being part of a conspiracy to promote ragging.
4. I hereby solemnly aver and undertake that:
   (a) My ward will not indulge in any behaviour or act that may be constituted as ragging under clause 3 of the Regulations.
   (b) My ward will not participate in or abet or propagate through any act of commission or omission that may be constituted as ragging under clause 3 of the Regulations.
5. I hereby affirm that, if found guilty of ragging, my ward is liable for punishment according to clause 9.1 of the Regulations, without prejudice to any other criminal action that may be taken against my ward under any penal law or any law for the time being in force.
6. I hereby declare that my ward has not been expelled or debarred from admission in any institution in the country on account of being found guilty of, abetting or being part of a conspiracy to promote, ragging; and further affirm that, in case the declaration is found to be untrue, the admission of my ward is liable to be cancelled.

Declared this _____day of _____month of _____year.

_____
Signature of Deponent

Name .....
Address.....
Telephone/Mobile No. .....

VERIFICATION

Verify that the contents of this affidavit are true to the best of my knowledge and no part of the affidavit is false and nothing has been concealed or misstated therein.

Verified at ____(place)____ on this the __(day)__ of __(month)__, ___(year)____

_____
Signature of Deponent

Solemnly affirmed and signed in my presence on this the __(day)__ of __(month)__, __(year)__ after reading the contents of this affidavit.

OATH COMISSIONER

Appendix-VII

CERTIFICATE-I

उत्तराखण्ड के अन्य पिछड़े वर्ग के लिए जाति प्रमाण–पत्र का प्रपत्र (UKBC)

प्रमाणित किया जाता है कि श्री/श्रीमती/कुमारी .....सुपुत्र/सुपुत्री श्री ..... निवासी ग्राम .....तहसील.....नगर.....जिला ..... उत्तराखण्ड राज्य की .....पिछड़ी जाति के व्यक्ति हैं। यह जाति उत्तराखण्ड लोक सेवा (अनुसूचित जातियों/अनूसूचित जनजातियों तथा अन्य पिछड़े वर्गों के लिए आरक्षण) अधिनियम ..... की अनुसूची .....के अन्तर्गत मान्यता प्राप्त है।

यह भी प्रमाणित किया जाता है कि श्री/श्रीमती/कुमारी .....उक्त अधिनियम ..... द्वारा निर्धारित क्रीमिलियर से आच्छादित नहीं है।

श्री/श्रीमती/कुमारी .....तथा अथवा उनका परिवार उत्तराखण्ड के ग्राम..... तहसील .....नगर.....जिला .....में सामान्यता रहता है।

अभ्यर्थी के हस्ताक्षर : हस्ताक्षर
दिनांक : पूरा नाम :
स्थान : मोहर
जिला अधिकारी/अतिरिक्त जिला अधिकारी/सिटीमजिस्ट्रेट/
परगना मजिस्ट्रेट/तहसीलदार

CERTIFICATE-2

अनुसूचित जाति/जनजाति (UKSC/UKST)
(अभ्यर्थी के जन्म जिले के जिला मजिस्ट्रेट/प्रथम क्लास मजिस्ट्रेट द्वारा प्रमाणित)

प्रमाणित किया जाता है कि श्री/श्रीमती/कुमारी .....सुपुत्र/सुपुत्री श्री ..... निवासी गांव/शहर .....तहसील.....जिला.....प्रदेश.....का जन्म..... जाति में हुआ था यह जाति अनुसूचित जाति/जनजातियों आदेश (संशोधन) एक्ट 1956 के अन्तर्गत भारत सरकार/उत्तराखण्ड शासन/.....सरकार द्वारा मान्य अनुसूचित जाति/जनजाति है।

अभ्यर्थी के हस्ताक्षर : हस्ताक्षर
दिनांक : पूरा नाम :
स्थान : मोहर
जिला अधिकारी/अतिरिक्त जिला अधिकारी/सिटीमजिस्ट्रेट/
परगना मजिस्ट्रेट/तहसीलदार

CERTIFICATE-3

स्थाई निवास प्रमाण–पत्र
(शासनादेश संख्या 2588/एक–4/सा0प्र0/2001)

प्रमाणित किया जाता है कि श्री/कु0/श्रीमती..... पुत्र/पुत्री/ पत्नी श्री.....निवासी ग्राम/मोह./वार्ड..... तहसील.....जिला..... उत्तराखण्ड के स्थायी निवासी है।

यह भी प्रमाणित किया जाता है कि उक्त प्रमाण पत्र निर्गत करने से पूर्व निर्धारित समस्त मानदण्डों की भली भांति जॉच कर ली गई है, और मै जांच से पूर्णतया सन्तुष्ट हूँ।

हस्ताक्षर जिला मजिस्ट्रेट
नाम :
मोहर

CERTIFICATE-4

उत्तराखण्ड के स्वतंत्रता सेनानी (Sub Category Children of Freedom Fighters)
(उस जिले के जिलाधिकारी द्वारा प्रमाणित जिसका अभ्यर्थी निवासी है)

प्रमाणित किया जाता है कि श्री/कुमारी.....श्री/श्रीमती..... निवासी ..... के पुत्र/पुत्री/पुत्र के पुत्र/पुत्र की पुत्री (अविवाहित) है। श्री/श्रीमती .....ने स्वतंत्रता संग्राम में भाग लेने के कारण–(जो लागू न हो उसे काटने का कष्ट करें)

1. कम से कम दो माह की वास्तविक अवधि के लिए कारावास का दण्ड भोगा हो, या
2. नजरबंदी या अण्डर ट्रायल कैदी के रूप में जेल में कम से कम तीन मास रहे हों, या
3. कम से कम 10 बेंतो की सजा पायी हो, या
4. फरार घेषित हुआ हो, या
5. गोली से घायल हुआ हो, या
6. वीरगति प्राप्त की हो, या
7. ऐसे व्यक्ति भी जो पेशावर काण्ड के रहें हों, या
8. भूतपूर्व आजाद हिन्द फौज के प्रमाणित सैनिक हो या
9. भूतपूर्व इंड़िया इंडिपेंडेस लींग के प्रमाणित सदस्य हो।

टिप्पणी : ऐसे व्यक्ति जिन्होनें माफी मांगी हो ,उक्त परिभाषा में सम्मिलित नही माने जायेंगे।

यह भी प्रमाणित किया जाता है कि श्री/कुमारी.....उपरोक्त स्वंतत्रता संग्राम सैनानी श्री/श्रीमती .....के पुत्र/पुत्री हैं अथवा उनके पौत्र/पौत्री हैं तथा वह उन पर वास्तव में आश्रित हैं।

अभ्यर्थी के हस्ताक्षर	हस्ताक्षर जिला मजिस्ट्रेट
दिनांक :	नाम :
स्थान :	मोहर

CERTIFICATE-5

उत्तराखण्ड सेना दल (Sub Category Defence Personnel Wards)
(अन्तिम यूनिट के आफिसर कमान्डिंग द्वारा प्रमाणित)

यह प्रमाणित किया जाता है कि श्री .....पुत्र/पुत्री ..... निवासी गॉव/शहर.....तहसील.....जिला..... उत्तराखण्ड ..... दिनांक .....को सेवा निवृत्त **(Superannuated)**/युद्ध में मारे गये/अंपग हो गये। वे उस समय भारतीय थल सेना, जलसेना/वायु सेना स्थान .....में .....के पद पर कार्यरत थे।

दिनांक :	यूनिट कमान्डिंग आफिसर के हस्ताक्षर
स्थान :	नाम :
	मेहर

(जिला मजिस्ट्रेट द्वारा प्रमाणित)

यह प्रमाणित किया जाता है कि श्री/कु0 .....निवासी गॉव/शहर..... तहसील.....जिला.....उपरोक्त सेना दल के सेवा निवृत्त **(Superannuated)**/युद्ध में मारे गये/अंपग हो गये कर्मचारी जो उत्तराखण्ड के स्थायी निवासी हैं/थें, के पुत्र/पुत्री हैं।

दिनांक :	हस्ताक्षर जिला मजिस्ट्रेट
स्थान :	नाम
	मेहर

CERTIFICATE-6

उत्तराखण्ड के ग्रामीण क्षेत्र के लिये अधिमान
(कालेज के प्रधानाचार्य द्वारा प्रमाणित)

प्रमाणित किया जाता है कि श्री/कु0 .....ने ..... कालेज से इण्टरमीडिएट की शिक्षा प्राप्त की है। यह कालेज तहसील .....जिला..... उत्तराखण्ड के ग्रामीण क्षेत्र में स्थित है तथा नगर महापालिका, नगर पालिका, छावनी बोर्ड, सूचित क्षेत्र या शहरी क्षेत्र के अधिकृत सीमा से बाहर है।

दिनांक : प्रधानाचार्य के हस्ताक्षर :
स्थान : नामः
मोहर

प्रधानाचार्य द्वारा दिया गया कालेज की स्थिति से संबंध उपरोक्त वक्तव्य प्रमाणित किया जाता है।

दिनांक : हस्ताक्षर जिला विद्यालय निरीक्षक/जिला मजिस्ट्रेट/अतिरिक्त जिला मजिस्ट्रेट
स्थान : नाम :
मोहर

CERTIFICATE-7

शारीरिक विकलांग के अधिमान के लिए प्रमाण–पत्र -Physically Handicapped
(मुख्य चिकित्सा अधिकारी द्वारा प्रमाणित)

प्रमाणित किया जाता है कि श्री/कु0 .....पुत्र/पुत्री, श्री/श्रीमती..... निवासी गॉव/शहर..... तहसील.....जिला..... उत्तराखण्ड, जांच के अनुसार नीचे लिखे कारणों से शारीरिक रूप से विकलांग है।

(केवल मुख्य चिकित्सा अधिकारी ही कारण लिखें)

.....

.....

यह भी प्रमाणित किया जाता है कि उपरोक्त विकलांग स्थिति अभ्यर्थी के शिक्षा प्राप्त करने में बाधक नहीं होगी।

दिनांक : हस्ताक्षर मुख्य चिकित्सा अधिकारी
स्थान : नाम
मोहर

CERTIFICATE –8

CERTIFICATE REGARDING WEIGHTAGE FOR SPORTS

For Under-graduate Candidates:

Note: This Certificate must be furnished in original duly signed by the Principal of an Institute from where **the candidate has appeared/passed in the qualifying examination and participated in the sports during XI-XII clases** and countersigned by the D.I.O.S./District Sports Officer of the Distt. concerned. Incomplete certificate or without a copy of participation certificate shall not be accepted.

I_____ certify that Sri/Km. _____son/daughter of _____ Distt. _____State _____is/was a bonafide student of this Institution and participated in the (name of game)_____organised by the State Council of sports during the period from _____to _____at (name of place) _____and was awarded a certificate of merit by the State Council of Sports, a copy of which is enclosed.

Date _____2022

(Signature of Principal)
Office Seal

COUNTERSIGNED

Date _____2022 (Signature of D.I.O.S. of Distt./District Sports Officer)
Office Seal

For Post-graduate Candidates:

Note: The Certificate must be furnished in original duly signed by either the Dean Student Welfare or Director of Physical Education or Sports Officer of the Institution from where the candidate has appeared/passed in the qualifying examination and participated in the sports during undergraduate studies and countersigned by the Principal/Dean of the College concerned. Incomplete certificate or without a copy of participation certificate shall not be accepted.

I_____ certify that Sri/Km. _____son/daughter of _____ Distt. _____ State _____is/was a bonafide student of this Institution and participated in the (name of game)_____organised by the Inter-University Board during the period from _____to _____at (name of place) _____and was awarded a certificate of merit by the Inter-University Board, a copy of which is enclosed.

Date _____2022 (Signature of D.S.W./Director of Physical Education/District Sports Officer)
Office Seal

COUNTERSIGNED

Date _____2022 (Signature of Principal/Dean)
Name _____
College Seal _____
Address _____

CERTIFICATE –9

CERTIFICATE REGARDING WEIGHTAGE FOR AGRICULTURIST

(To be signed by an officer not below the rank of Tehasildar)

(For the year 2022 - 2023)

This is to certify that Shri/Smt/Km. ..... (Name of landholder) Father/mother, Grand Father/Grand Mother (Paternal side) of Shri/Miss (Name of candidate) ..... of village ..... Tehsil.....District …….holds ..... hectare of land in capacity as owner.

Further certified that his/her main source of income is derived from personal cultivation of land held by him/her.

Place ..... Signature.....

SEAL Name .....

Date..... Designation.....

CERTIFICATE –10

CERTIFICATE IN RESPECT OF SON/DAUGHTER/SPOUSE OF THE REGULAR EMPLOYEE/DAILY WAGE WORKERS (240 DAYS) OF G.B. PANT UNIVERSITY OF AGRIC. & TECH., PANTNAGAR

I…….hereby certify that Sri/Smt.…… father/mother/husband of Sri/Km./Smt. ……who has applied for the admission to an Undergraduate Programme through Entrance Examination 2022 holds the post of ……. under me as a regular employee of the G. B. Pant University of Agriculture & Technology, Pantnagar.

(Signature of Father/Mother/Husband) (Signature of Sectional Head)

Date…….2022 (Designation Stamp)

Appendix-VIII

SYLLABUS FOR ENTRANCE EXAMINATION OF UNDERGRADUATE PROGRAMME

MENTAL AGILITY

No Syllabus is prescribed.

MATHEMATICS

Sets and Functions

Sets : Sets and their representations. Empty set. Finite & Infinite sets. Equal sets.Subsets. Subsets of the set of real numbers especially intervals (with notations). Power set. Universal set. Venn diagrams. Union and Intersection of sets. Difference of sets. Complement of a set and its properties.

Relations and Functions: Ordered pairs, Cartesian product of sets. Number of elements in the cartesian product of two finite sets. Cartesian product of the reals with itself (upto R x R x R). Definition of relation, pictorial diagrams, domain. codomain and range of a relation. Function as a special kind of relation from one set to another. Pictorial representation of a function, domain, co-domain & range of a function. Real valued function of the real variable, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum and greatest integer functions with their graphs. Sum, difference, product and quotients of functions.

Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions, composite functions, inverse of a function.

Trigonometric Functions: Positive and negative angles. Measuring angles in radians & in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Truth of the identity $\sin^2 x + \cos^2 x=1$, for all x. Signs of trigonometric functions and sketch of their graphs. Expressing sin (x+y) and cos (x+y) in terms of sin x, sin y, cos x & cos y. Deducing the identities like the following:

$$\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y}, \cot(x \pm y) = \frac{\cot x \cot y \mp 1}{\cot y \pm \cot x},$$

$$\sin x + \sin y = 2 \sin\frac{x+y}{2} \cos\frac{x-y}{2}, \cos x + \cos y = 2 \cos\frac{x+y}{2} \cos\frac{x-y}{2},$$

$$\sin x - \sin y = 2 \cos\frac{x+y}{2} \sin\frac{x-y}{2}, \cos x - \cos y = -2 \sin\frac{x+y}{2} \sin\frac{x-y}{2},$$

Identities related to sin 2x, cos2x, tan 2x, sin3x, cos3x and tan3x. General solution of trigonometric equations.

Inverse Trigonometric Functions

Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions, Elementary properties of inverse trigonometric functions

Algebra

Principle of Mathematical Induction: Processes of the proof by induction, motivating the application of the method by looking at natural numbers as the least inductive subset of real numbers. The principle of mathematical induction and simple applications.

Complex Numbers and Quadratic Equations: Need for complex numbers, especially root - 1, to be motivated by inability to solve every quadratic equation. Brief description of algebraic properties of complex numbers. Argand plane and polar representation of complex numbers. Statement of Fundamental Theorem of Algebra, solution of quadratic equations in the complex number system.

Linear Inequalities: Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables. Solution of system of linear inequalities in two variables- graphically.

Permutations & Combinations: Fundamental principle of counting. Factorial n.(n!)Permutations and combinations, derivation of formulae and their connections, simple applications.

Binomial Theorem: History, statement and proof of the binomial theorem for positive integral indices. Pascal's triangle, General and middle term in binomial expansion, simple applications.

Sequence and Series: Sequence and Series, Arithmetic progression (A. P.), Arithmetic mean (A.M.), Geometric progression (G.P.), General term of a G.P., Sum of n terms of a G.P., Geometric mean (G.M.), Relation between A.M. and G.M., Sum to n terms.

Coordinate Geometry

Straight Lines: Brief recall of 2D from earlier classes. Slope of a line and angle between two lines. Various forms of equations of a line: parallel to axes, point-slope form, slope-intercept form, twopoint form, intercepts form and normal form. General equation of a line. Distance of a point from a line.

Conic Sections: Sections of a cone: circle, ellipse, parabola, hyperbola, a point, a straight line and pair of intersecting lines as a degenerated case of a conic section. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle.

Three-dimensional Geometry: Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points and section formula.

Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, coplanar and skew lines, shortest distance between two lines. Cartesian and vector equation of a plane.Angle between (i) two lines, (ii) two planes, (iii) a line and a plane. Distance of a point from a plane.

Vectors

Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors, scalar triple product of vectors.

Calculus

Limits and Derivatives: Derivative introduced as rate of change both as that of distance function and geometrically, intuitive idea of limit. Definition of derivative, relate it to slope of tangent of the curve, derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions.

Continuity and Differentiability

Continuity and differentiability, derivative of composite functions, chain rule, derivative of inverse trigonometric functions, derivative of implicit functions. Concept of exponential and logarithmic functions.

Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives. Rolle's and Lagrange's Mean Value Theorems (without proof) and their geometric interpretation.

Applications of Derivatives

Applications of derivatives: rate of change of bodies, increasing/decreasing functions, tangents and normals, use of derivatives in approximation, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems (that illustrate basic principles and understanding of the subject as well as real-life situations).

Integrals

Integration as inverse process of differentiation.Integration of a variety of functions by substitution, by partial fractions and by parts, Evaluation of simple integrals of the following types and problems based on them.

$$\int \frac{dx}{x^2 \pm a^2}, \int \frac{dx}{\sqrt{x^2 \pm a^2}}, \int \frac{dx}{\sqrt{a^2 - x^2}}, \int \frac{dx}{ax^2 + bx + c}, \int \frac{dx}{\sqrt{ax^2 + bx + c}}$$

$$\int \frac{px + q}{ax^2 + bx + c} dx, \int \frac{px + q}{\sqrt{ax^2 + bx + c}} dx, \int \sqrt{a^2 \pm x^2}\, dx, \int \sqrt{x^2 - a^2}\, dx$$

$$\int \sqrt{ax^2 + bx + c}\, dx, \int (px + q)\sqrt{ax^2 + bx + c}\, dx$$

Definite integrals as a limit of a sum, Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.

Applications of the Integrals

Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses (in standard form only), Area between any of the two above said curves (the region should be clearly identifiable).

Differential Equations

Definition, order and degree, general and particular solutions of a differential equation. formation of differential equation whose general solution is given. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree. Solutions of linear differential equation of the type: (dy/dx) + py = q, where p and q are functions of x or constants.

Mathematical Reasoning

Mathematical Reasoning: Mathematically acceptable statements. Connecting words/ phrases – consolidating the understanding of "if and only if (necessary and sufficient) condition", "implies", "and/or", "implied by", "and", "or", "there exists" and their use through variety of examples related to real life and Mathematics. Validating the statements involving the connecting words difference between contradiction, converse and contra positive.

Statistics and Probability

Statistics: Measure of dispersion; mean deviation, variance and standard deviation of ungrouped/grouped data. Analysis of frequency distributions with equal means but different variances.

Probability: Random experiments: outcomes, sample spaces (set representation). Events: occurrence of events, 'not', 'and' and 'or' events, exhaustive events, mutually exclusive events Axiomatic (set theoretic) probability, connections with the theories of earlier classes. Probability of an event, probability of 'not', 'and' & 'or' events.

Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean and variance of random variable.

Matrices

Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operation on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication.

Non- commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2).Concept of elementary row and column operations. Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries).

Determinants

Determinant of a square matrix (up to 3 x 3 matrices), properties of determinants, minors, co- factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.

Linear Programming

Introduction, related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems, mathematical formulation of L.P. problems, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded or unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).

PHYSICS

Physical measurements, System of units, Dimensions, Errors in measurement, Motion in one, two and three dimensions, Laws of motion, Work, Energy and power, Center of mass, Rigid bodies, Rotational motion, Gravitation, Acceleration due to gravity, Gravitational potential energy, Geostationary satellites.

Brownian motion, Avogadro's hypothesis and Avogadro's number, Inter-atomic and intermolecular forces, States of matter, Crystalline and glassy solids, Elasticity, Pressure, Archimede's principle, Viscosity, Fluid flow, Surface tension.

Kinetic theory of gases, Temperature, Thermal expansion, Heat, Specific heat, Heat capacity, First and second laws of thermodynamics, Heat engines, Transfer of heat.

Periodic motion, Time period and frequency, Simple harmonic motion, Springs, Kinetic and potential energy in SHM, Simple pendulum, Forced oscillations, Resonance, Free and damped oscillations, Superposition principle of waves, Harmonic waves, Reflection of waves, Standing and traveling waves, Beats, Doppler effect.

Properties of electric charge, Coulomb's law, Lines of force, Electric dipole, Electric flux, Electric field, Gauss's theorem, Electrostatic potential, Potential energy, Capacitors and capacitance, Current, Voltage, Resistance, Ohm's law, Kirchhoff's laws, Ammeter, Voltmeter, Chemical and thermal effects of currents, Thermoelectricity.

Magnetic field due to a current, Biot-Savart law, Lorentz force, Amperes law, Magnetic dipole moment, Torque, Galvanometer, Moving charges in magnetic and electric fields, Field of a bar magnet, Magnetic field lines, Magnetic flux, Magnetic field of earth, Tangent galvanometer.

Faraday's law of induction, Lorenz's law, Lorentz force, Inductance, RC, LR and LCR circuits, Power flow in AC circuits, Resonance and oscillations, Electromagnetic waves, em-wave equations, Spectrum of e.m. waves and light.

Light rays, Wavefronts, Coherent and incoherent sources, Interference, Diffraction and Polarization of light, Luminousity, Velocity of light, Reflection from spherical surfaces, Refraction at spherical surfaces, Lenses,

Dispersion and spectroscopes, Optical defects in mirrors and lenses, Optical instruments, Microscope, Telescope, Cathode rays, e/m of electrons, Photoelectric effect, Photocell, Wave nature of matter.
Atomic masses, Binding energy, Size of the nucleus, Radioactivity, Nuclear energy, Fission and fusion reactions.
Molecules, Molecular energies, Rotational and vibrational spectra, Solids and their structures, Semiconductors, Semiconductor diodes, Transistors.

BIOLOGY

BOTANY

1. Morphology of root, stem and leaf and their modifications.
2. Flower, inflorescence, seed and fruits.
3. Development of male and female gametophytes, pollination, fertilization and development of embryo.
4. Germination, growth and development.
5. Cell and cellular functions, tissues, anatomy of root, stem and leaf of both monocot and dicots, secondary growth.
6. Elementary study of Plant Physiology.
   (a) Structure of root hair, uptake of water and minerals root pressure and transpiration.
   (b) Structure of stomata, function, factors, and carbon assimilation.
   (c) Translocation and storage of food materials.
   (d) Respiration
   (e) Mineral nutrition and metabolism
   (f) Plant hormones and vitamins.
7. Plant taxonomy and elementary study of the following families:
   (a) Brassicaceae (b) Leguminosae (c) Malvaceae (d) Solanaceae (e) Cucurbitaceae
   (f) Asteraceae (g) Poaceae (Gramineae)
8. Classification of plant kingdom. A brief study of the following groups/plants:
   (a) Viruses (b) Bacteria (c) Spirogyra (d) Mucor/Rhizopus (e) Moss (f) Fern (g) Cycas
9. Natural resources and their conservation; environment and pollution-air, water and soil community, ecosystem, pyramids, energy flow, mineral cycles, and succession.
10. Plant tissue culture, biotechnology and its applications.

ZOOLOGY

1. A brief account of classification of animal kingdom with reference to animal biodiversity including both invertebrates and vertebrates.
2. Physiology of animals with emphasis on Human. Homeostasis, nutrition and digestion, circulation, respiration, reproduction, excretion, co-ordination and endocrine.
3. Embryology of human
4. A brief account of animal biotechnology. Immune system and human health, DNA, Gene and genetic engineering.
5. Cell and cell division.
6. Mendelism, sex determination, sex linked inheritance, genetic disorders and polyploidy.
7. Biological molecules including carbohydrates, lipids, proteins and nucleic acids.

CHEMISTRY

ATOMS AND ATOMIC STRUCTURE

Measurements in Chemistry (Significant figures, S.I. Units), Mole concept, Nature of light and electromagnetic waves, atomic spectra, Bohr model, line spectra (a brief idea). In adequacy of Bohr's Model, concept of an atomic orbital, quantum numbers and its application to electronic structures of atoms). Pauli's exclusion principle. Aufbau principle, Stability of filled & half-filled orbital Configuration of transition elements in 3d series. Dual nature of particle and radiation (photoelectric effect etc.) de-Broglie equation, uncertainty principle (simple numerical problems), Hund's rule.

PERIODIC PROPERTIES OF ELEMENTS

Periodic law, long form of periodic table, Periodicity in properties like atomic radii and volume, ionic radii, ionization energy, electron affinity. Division of elements into s, p, d and f blocks.

CHEMICAL BONDING AND MOLECULAR STRUCTURE

Concept of orbital overlap in bond formation, sigma and pi bonds shapes. of molecules (VSEPR) Theory, hybridization (sp, sp^2, sp^3, dsp^2 sp^3d, sp^3d^2), properties of covalent compounds, shapes of simple

molecules like H_2O, NH_3 CH_4 PF_5 SF_6 C_2H_4 and C_2H_2. Coordinate bond formation with a few examples, Ionic bonds; definition, factors influencing the formation of ionic compounds. An elementary treatment of metallic and hydrogen bonds. Idea of molecular orbital, bonding and anti boding, molecular orbital picture in hydrogen and oxygen molecules only.

CHEMISTRY OF REPRESENTATIVE ELEMENTS

The chemistry of s and p block elements with reference to general trends in physical and chemical properties, anomalous behavior of first member of each group, diagonal relationship.
Group 1 Elements: Alkali metals; Group 2 Elements: Alkali earth metals; Group 13 Elements: Boron family; Group 14 Elements: Carbon and silicon family; Group 15 Elements: Nitrogen family;
Group 16 Elements: Oxygen family; Group 17 Elements: Halogen family; hydrogen; Group 18 Elements: Noble gases;
Preparation and properties of a few important compounds of representative elements (like halides, oxides and oxy acids etc.)

COORDINATION CHEMISTRY AND ORGANOMETALLICS

Coordination Compounds nomenclature; Isomerism in Coordination compounds; Bonding in Coordination compounds; Valence Bond Theory Application of Coordination Compounds; Compounds containing metal carbon bonds; Application of organometallics.

CHEMICAL THERMODYNAMICS

Energy changes during a chemical reaction. First law of thermodynamics. Concepts of internal energy and enthalpy. Application of first law of thermodynamics. Hess's law of constant heat summation, Heat of reaction, Heat of neutralization, heat of combustion, heat of fusion and vaporization. Numericals based on the above concepts.
Second law of Thermodynamics: Entropy, free energy, spontaneity of a chemical reaction, free energy and chemical equilibrium, free energy available for useful work. Third law of Thermodynamics (concept of zero entropy only).

CHEMICAL EQUILIBRIUM & PHASE EQUILIBRIUM

Law of mass action and its application to chemical equilibrium.
Effect of changing the conditions of system at equilibrium-Le-Chatelier's principle.

IONIC EQUILIBRIUM IN SOLUTION

Equilibrium involving ions, various concepts of acids and bases-Arrhenius, Bronsted, Lowery and Lewis, dissociation of acids and bases, acid-base equilibria, ionization of water, pH scale, hydrolysis of slats, pH calculation of solutions, acid base titration using indicators. Solubility equilibria-solubility of sparingly soluble salts, solubility equilibria and solubility products, common ions effect, buffer solution and buffer action.

REDOX REACTIONS

Oxidation and reduction-electron transfer concept, redox reactions in aqueous solution, oxidation number, balancing of chemical equations in redox reactions by oxidation number method and ion-electron method or half equation method.

CHEMICAL KINETICS

Rate of reaction-symbolic expression, rate expression. Units of rates and specific rate constants. Order of reaction, molecularity. Determination of order of reaction and concentration (first order reactions only). Temperature dependence of rate constant. Activation energy, Photochemical reactions.

STATES OF MATTER

Gaseous state: Properties of a gas, gas laws, kinetic molecular theory of gases, Solid state. Classification of solids, X-ray studies of crystal lattices & unit cell. Liquid slate, Properties of Liquids like vapour pressure, surface tension, viscosity.

NUCLEAR & RADIOCHEMISTRY

Nature of radiation from radioactive substances; nuclear structure and nuclear properties, Nuclear reaction, radioactive disintegration series, artificial transmutation of elements. Isotopes and their uses. Radio carbon dating. Synthetic elements.

SOLUTIONS

Types of solutions, Vapour pressure of solutions and Raoults' law. Colligative properties of solutions. Calculation of molecular masses. Electrolyte solutions, distribution law.

COLLOIDS AND MACROMOLECULES

Colloidal solutions, electroinetic and optical of colloidal Solutions, properties, applications, concept of gold number, protective colloids, Macromolecules, molecular weight of macromolecules, methods of determining molecular weight of macromolecules.

SURFACE AND CATALYSIS

Absorption and adsorption, emulsions, micelles, modern developments, Interfaces, Homogeneous and heterogeneous catalysis, structure of a catalyst.

CARBON AND ITS COMPOUNDS INTRODUCTION TO CARBON COMPOUNDS

Elemental Carbon. Inorganic compounds of carbon (oxides and carbides)

HYDROCARBONS

Alkanes: sp^3-hybridization, sigma bond, chain isomerism; Alkanes sp^2 hybridization, carbon-carbon double bond, sigma and bi-bonds. Planer molecular of ethylene cis-trans isomerism; Alkanes: sp-hybridization C (C, linear molecule of acetylene); Arenes: Delocalisation of electronics in benzene, Resonance structure of benzene: o.m.p. –isomers ; Systematic nomenclature of organic compounds.

PREPARATION AND PROPERTIES OF HYDROCARBONS

Source of hydrocarbons (composition of coal and petroleum, hydrocarbons from coal and petroleum, cracking and reforming, quality of gasoline-octane number, gasoline additives).

Laboratory preparation of alkanes (preparation from unsaturated hydrocarbons, alkyl halides and carboxylic acids) ; Laboratory preparation of alkynes (Preparation from alcohol and alkyl halides); Laboratory preparation of alkynes (Preparation from calcium carbide and acetylene) ; Physical properties of alkanes (boiling and melting points, solubility and density)

Reactions of hydrocarbons, (oxidation, additions, substitutions and miscellaneous reactions).

PURIFICATION AND CHARACTERIZATION OF ORGANIC COMPOUNDS

Purification (crystallization, sublimation, distillation, differential extraction and chromatography), Qualitative analysis of elements. Quantitative analysis (estimation of carbon, hydrogen, nitrogen, halogen). Determination of molecular mass (Victor Mayer's Method). Calculation of empirical and molecular formulae from weight percentage data of elements and molecular weight.

ORGANIC CHEMISTRY BASED ON FUNCTIONAL GROUPS

HALIDES AND HYDROXY COMPOUNDS

Nomenclature of compounds containing halogen atoms and hydroxyl group; haloarens, alcohols and phenols, correlation of physical properties and uses. A few important polyhatogen compounds-chloroforms, carbon tetrachloride, DDT, benzene hexachloride. Polyhydric compounds, ethane 1.2-diol. Propane 1,2,3, triol.

ORGANIC CHEMISTRY BASED ON FUNCTIONAL GROUPS-I

Ethers, aldehdes ketones, carboxylic acids and their derivatives. Nomenclature of ethers, aldehydes ketones, carboxylic acids and their derivative. Acylhalides, acid anhydride, amides and esters, methods of preparation, correlation of physical properties with their structures, chemical properties & uses.

ORGANIC CHEMISTRY BASED ON FUNCTION GROUPS-II

Nitrogen compounds. A brief description of the chemistry of the carbon compounds containing nitrogen (cyanides, isocyanides, nitro-compounds and amines) and their methods of preparation; correlation of physical properties with structure, chemical reaction, uses.

SYNTHETIC AND NATURAL POLYMERS

Classification of polymers, some important natural and synthetic polymers (with stress on their general methods of preparation); some common examples and their important uses.

BIO CHEMISTRY: (Structures of complicated molecules excluded)

CARBOHYDRATES: Monsaccharides, Disaccharides, Polysaccharides.

AMINO ACIDS AND PEPTIDES: Structure and classification, properties of amino acids and peptides, biologically important peptides.

PROTEINS AND ENZYMES: Structure of proteins, some important proteins, enzymes.

NUCLEIC ACIDS: Chemical properties of nucleic acids, Biological functions of nucleic acids, protein synthesis.

LIPIDS: Classification, structure and function.

AGRICULTURE

AGRONOMY

Cultivation of common crops-wheat, paddy, cotton, jowar, bajra, maize, soybean, arhar, mustard, sunflower, pea, groundnut, gram, tobacco, barseem, potato and sugarcane under the following heads:
Recommended varieties and their main characteristics, suitable areas, seed rate, time and method of sowing, irrigation, fertilizer use, control of weeds, insect-pests and diseases, harvesting, processing and yield.
Soils-origin and classification loam, silt, clay, sandy loam, etc.; physical and chemical properties; soil conservation. Use of fertilizers, essential nutrients- nitrogen, phosphorus and potassium uptake by different crops, organic and inorganic fertilizers and their effects on crops and soil, methods of using fertilizers, farmyard manure, composting, green manauring, study of organic and inorganic fertilizers/ manures. Pollution of soil, water and air in modern agriculture and remedial measures.
Irrigation and Drainage – water requirement of crops, measurement of water discharge, prevention of loss of water; quality of water; different methods of irrigation – flooding, basin method, border /strip method, sprinkler and drip irrigation – their advantages and limitations. Necessity for drainage, damage to soil and crops due to excess moisture, prevention of formation of acidic and alkaline soils and their management; natural calamities- floods and drought and their management.

HORTICULTURE

Study of following horticultural crops including recommended varieties and their main features, suitability for different regions, time and method of sowing, fertilizer use, irrigation, diseases and pests and their control.
Crops- cabbage, cauliflower, onion, garlic, cucurbits, bittergourd, bottlegourd, muskmelon, squash, ridgegourd; root crops-carrot, radish sweet potato, turnip; peas, tomato, bringal, lady's finger, spices; fruit crops such as banana, apple, mango, litchi, citrus, guava, papaya, peach etc.

AGRICULTURAL ENGINEERING

Type of iron and steel, wood, plastic and tin used in agricultural implements and their forms & properties. Study of different types of ploughs-their merits and demerits; mechanical devices such as cultivator, harrow, sprayer, seed drill, thereshers etc. their management & cost, selection of prime movers, water lifting devices; discharge, command area, cost of different system; soil preparation, methods of ploughing, need for tillage, kinds of tillage, interculture, equipment for interculture.

Power transmission through belts, pullies and gears, questions relating to number of teeth in gears according to speed and size of pullies, hand operated chaff cutters, cane crusher etc., draught and its measurement.

AGRICULTURAL ECONOMICS

Introductory agricultural economics-meaning and scope, significance of agricultural economics in national planning. Production – meaning, factors of production such as land, labour, capital and management, properties of factor of production; law of returns; intensive and extensive agriculture; Exchange - meaning, types, advantages; types of markets, general price determination; money and credit; banks and their functions; principle of international trade, Distribution-meaning, rent, wages, interest and profit; Consumption -meaning, wants and their properties, law of diminishing marginal utility, law of demand, relative prices and standard of living; Cooperation - meaning, principles of cooperation, types of cooperative societies in agriculture, single purpose and multi-purpose cooperative societies, land development banks: Agriculture-place in Five Year Plans; statistics of agricultural production in the State; Major programmes of agricultural development.

ANIMAL HUSBANDRY AND VETERINARY SCIENCE

Study of major breeds of cows, buffaloes, goat, sheep and poultry; elementary physiology and anatomy of cows and bullocks; estimate of their age; characteristics of good milch cows and buffaloes, bulls and bullocks.

Care and management of pregnant cow, during calving, newborn calves, young calves, mulch cows;
poultry management.

Appendix-IX

SYLLABUS FOR ENTRANCE EXAMINATION OF MASTER'S PROGRAMME

The syllabus for Postgraduate programmes will be at par with the standard course content of the subject approved by the UGC/ICAR for Indian Universities. The syllabus for Life Sciences & Physical Sciences groups are given below:

LIFE SCIENCES

UNIT- I

Morphology and anatomy of land plants, Cell cycle, cell division, senescence, life cycle of an angiosperm, pollination, fertilization, embryogenesis, seed formation, seed storage proteins, seed dormancy and germination. Concept of cellular totipotency, organogenesis and somatic embryogenesis, Principles of Mendelian inheritance, linkage, recombination and genetic mapping; extrachromosomal inheritance; gene mutation, chromosome aberrations (numerical and structural), transposons. Introduction to Plant Breeding. Pteridophytes and Bryophytes, Taxonomy and. Plant Geography

UNIT- II

Diversity, distribution, systematics and phylogeny of animals, Origin of life, history of life on earth, evolutionary theories, natural selection, adaptation, speciation. Principles of inheritance, molecular basis of heredity, the genetic material, transmission of genetic material, Structure of cell, cellular organelles and their structure and function, cell cycle, cell division, Comparative physiology of different systems, Parasitic organisms and hostparasite relationship,. Immune response, cellular and humoral immunity, evolution of the immune system: Embryonic development, cellular differentiation, organogenesis. metamorphosis, genetic basis of development. The ecosystem, habitats, species diversity, zoogeography and Animal behavior.

UNIT- III

Structure of atoms, molecules and chemical bonds, Isomerism, hydrogen bond and hydrophobic interaction in biomolecules; Chemistry of biomolecules-carbohydrates, amino acids, proteins, lipids and nucleic acids,. Enzymes and their kinetics, factors affecting enzyme activity, Competitive and non-competitive inhibitions. Coenzymes and cofactors, Metabolism of carbohydrats, fatty acids and proteins. eukaryotic genome organization (chromatin structure), Genetic code, replication, transcription and translation. Regulation of gene expression, Plant pigments, Secondary metabolites, Vitamins, Hormones and metabolic regulation.

UNIT- IV

Spontaneous generation theory-Grem theory-Discovery of antibiotics-Types of microscopes-Principles and equipment of different kinds of sterilisation-staining Techniques-Nutritional types of bacteria-Growth curve-Factors influencing bacterial growth-Fermentation and other Metabolic pathways: Principle and Application-Classification of Bacteria-Gene transfer methods in microorganisms Antigen and antibody reaction. Role of microbes in carbon and nitrogen cycles-Influence of Rhizosphere on soil microorganism. Microbes in Industry and health

UNIT- V

Plant physiology and its significance in agriculture; physical properties and chemical constitution of protoplasm; plant cell water relation-imbibition, surface tension, diffusion, osmosis; absorption and translocation of water and nutrients; transpiration, guttation, mineral deficiencies and their symptoms; physiological: disorders, correction, hydrophonics, foliar nutritions aerobic and anaerobic respiration; Photo respiration Factors affecting respiration and Photorespiration. Photosynthesis- modern concept and the factors affecting photosynthesis, nitrogen fixation growth development and differentiation; growth hormones, growth retardants, growth inhibitors and their use in agriculture; tropism in plants photoperiodism and vernalization; seed dormancy, germination; fruit ripening process and its control.

UNIT- VI

Concepts and scope of biotechnology, Tissue culture and its applications, Micrpropagation, Meristem culture and production of virus free plants. Anther and microspore culture. Embryo and ovary culture. Protoplast isolation, fusion, and somatic hybridization, cybrids, somaclones, synthetic seeds, In vitro germ conservation, Cryopresertvation, Organellar DNA, satellite and repetitive DNA, DNA repair, Recombinant DNA technology, Cloning vector, Restriction enzymes, Gene cloning. Methods of gene transfer in plants, Achievements and recent developments of genetic engineering in agriculture.

UNIT- VII

Ecology and its relevance to life, natural resources-their management and conservation, Climatic elements as factors of crop growth, Impact of change in environment on cropping patterns, Change in environment due to agricultural environmental pollution and associated hazards to crops and animals, Human liquid and solid waste disposal, Pollution prevention and remediation, Concepts and dynamics of ecosystem component, Food chain and energy flow, Productivity and biogeochemical cycle, Types of ecosystem, Population ecology and biological control, Community structure and organization, Sustainable development, Economic importance of microbes, plants and animals.

UNIT- VIII

Electronic configuration of elements, periodic classification of elements, atomic number, atomic and ionic radii, ionization potential, electron affinity and electro negativity, electronic theory of valency, sigma and pi-bonds, hybridization and directional nature of covalent bonds, metallic bonds, VSEPR theory, V.B. and MO theory, ionic solids and weak interactions, Lewis and Bronsted theories of acids and bases, hard soft acid and bases (HSAB), oxidation states and oxidation number, common oxidizing and reducing agents, Ionic equations. Natural and artificial radioactivity, radioactive decay, nuclear fission and fusion. Chemistry of the common elements and their compounds. Principles of extraction isolation (and metallurgy) of important elements. Chemistry of transitional elements, lanthanides and actinides. Structures of hydrogen peroxide, diborane, aluminium chloride and the important oxyacids of nitrogen, phosphorus, chlorine and sulphur. Interhalogen compounds.

Outlines of the manufactures of: sodium carbonate, sodium hydroxide, ammonia, nitric acid, sulphuric acid, cement, glass, ceramics and artificial fertilizers.

Inert gases: Isolation and Chemistry, structure of inert gas compounds.

Werner's theory of coordination compounds, V.B. and M.O. theory of bonding in metal complexes, electronic spectrum, magnetic and spectral properties of metal complexes. Organo metallic compounds. Bioinorganic chemistry, biological role of alkaline earth metal ions, metalloporphyrins.

Analytical chemistry: Principles and methods of chemical analysis, principles involved in separation techniques, chromatography.

UNIT- IX

Modern concepts of covalent bonding, bond lengths, energy and bond angles, electron displacements, inductive, electromeric, mesomeric and hyper conjugative effects, resonance ad its applications to organic chemistry, tautomerism, effects of structure on chemical reactions, dissociation constants.

Mechanism of organic reactions: Types of reagents and organic reactions, reaction intermediates, product analysis, isotope effects, kinetic and stereo chemical studies.

Stereochemistry: Optical and geometrical isomerism, chirality, enantiomers, stereogenic centers, distereomers, resolution and recemization, relative and absolute configuration, sequence rules, E&Z and R&S nomenclature, concept of conformation and conformational analysis of ethane, butane and cyclohexane and sugars.

Chemistry and reactions of derivative of aliphatic and aromatic compounds including: Alkanes, alkynes and alkenes. arenes and aromaticity, benzene and polynuclear hydrocarbons, alkyl and aryl halides, S_N1, S_N2 and S_Ni reactions, nuclear and side chain reactions, aromatic substitutions reactions, elimination reactions. Aliphatic and aromatic alcohols and phenols, ethers and epoxides, aliphatic and aromatic aldehydes and ketones, aliphatic and aromatic carboxalic acids and their derivatives, aliphatic and aromatic amines and amides, synthetic applications of diazonium salts. Amino-acids.

Reactions and applications of organometallic compounds, Acetoacetic and malonic esters, Organic synthesis via enolates.

Heterocyclic compounds, pyridine, quinoline, thiophene, furan and pyrole.

Important organic name reactions and rearrangements of synthetic importance.

Carbohydrates, classification and general reactions, glucose, fructose and amino acids and proteins, terpenoids and alkaloids. Polymers, dyes and pigment.

Theory and application of spectral techniques, UV, IR and NMR in structure elucidation of simple organic molecules.

UNIT- X

Elementary quantum mechanics

Gaseous states: Kinetic theory of gases and gas laws, Maxwell's law of distribution of velocities, Van der Waal's equation, Law of corresponding states, Liquification of gases, Ratio of Cp/C_V.

Thermodynamics: The first law of thermodynamics, Isothermal and adiabatic expansion, Enthalphy, heat capacities, Thermo chemistry –heats of reaction, formation, solution and combustion, Calculation of bond

energies, Kirchhoff equation, Criteria for spontaneous changes, second law of thermodynamics entropy. Free energy, criteria of thermodynamic equilibrium.
Solutions: osmotic pressure lowering of vapour pressure, depression of freezing point, elevation of boiling point, determination of molecular weights, association and dissociation of solutes.
Chemical equilibrium, law of mass action and its applications to homogeneous and heterogeneous equilibrium, Le Chatelier's principle, Influence of temperature on chemical equilibrium.
Electrochemistry: Faraday's laws of electrolysis, conductivity of an electrolyte: equivalent conductivity and its variation with dilution, solubility of sparingly soluble salts, electrolytic dissociation, Ostwald's dilution law, anomaly of strong electrolytes, solubility product, strength of acids and bases: hydrolysis of salts, hydrogen ion concentration buffer action, theory of indicators.
Electrochemical cells: Reversible cells, standard hydrogen and calomel electrodes and redox-potentials, concentration cells, determination of pH transport number and ionic product of water, Potentiometer titration, chemical kinetics: Molecularity and order of a reaction, First order and second order reactions, Determination of order of a reaction, temperature coefficients and energy of activation, Collision theory of reaction rates, Activated complex theory.
Phase rule: Explanation of the terms involved, Applications to one and two component system, reduced phase rule, distribution law.
Colloids: General nature of colloidal solutions and their classification, general methods of preparation and properties of colloids, coagulation, protective action, gold number, adsorption phenomenon and adsorption isotherms.
Catalysis: Homogeneous and heterogeneous catalysis, catalytic promoters and poisons.
Photochemistry: Law of photochemistry. Simple numerical problems.

PHYSICAL SCIENCES

UNIT- I

Gradient, Divergence and Curl of Vector fields, Gauss's, Stoke's and Green's theorems. Newton's laws, Galilean invariance, Non-relativistic motion of charged particles in electric and magnetic field, conservation of linear, angular momenta and energy, Collisions, Centre of mass frame. Inverse square law force, Kepler's laws. Harmonic oscillator. Damped harmonic oscillator, Quality factor. Coulomb's law, field due to a charge distribution, Gauss's theorem and its applications, Line integral of electrical field, electric potential, Force on a surface charge, Energy associated with electric field. Current density, charging and discharging of a condenser through a resistance. Force on a moving charge, Fields due to a Helmholtz coil, Solenoid and a current loop, magnetic flux, Faraday's law in differential form, Self and mutual inductance, RL and RC circuits. Dielectrics, Moments of a charge distribution, Torque and force on a dipole in and electric field, Induced dipole moment, Polarisability, Qualitative idea about dia, para and Ferro magnetism, Magnetic susceptibility, Langevin's theory of paramagnetism, Hysterisis phenomenon, AC circuits.

UNIT- II

Rutherford's atomic model, Bohr's model and spectra of hydrogen atom fine structure, Sommerfield model, spatial quantization and electron spin. Normal Zeeman effect. X-ray spectra, Moseley's law, Luminescence, Principle and working of different kinds of Lasers, Raman effect.
Laws of thermodynamics**,** Entropy, C_p and C_v of a gas. Macroscopic and microscopic systems, Internal and external energy states of a molecule, Reversible and irreversible processes, production of low temperatures. Maxwell's thermodynamic relationships, Triple point, applications of Maxwell's thermodynamical relations. Introduction to cryogenics and refrigeration. Black body radiation and different radiation laws. Einstein's theory of specific heat and its limitations, Lattice vibrations, phonons-Debye's theory of specific heat of solids, specific heat of diatomic gases and its variation with temperature.
Black body spectrum, photoelectric effect and Compton effect. De Broglie's waves, Group and phase velocities, Uncertainty principle. Schrödinger's equation, Operators, Expectation values. Applications of Schrödinger's equation and its various applications. Michelson Morley experiment, Postulates of special relativity, Lorentz transformations, Relativistic kinematics

UNIT- III

Fermat's Principle, Cardinal points, telescopic combinations, Interference and diffraction of light, Rayleigh criterion, resolving power of telescope and microscope, Grating, Resolving power of a grating, Polarization and different kinds of polarized light, Double refraction, optical activity Electromagnetic theory**.**
Kirchoffs Laws, Thevenins & Nortons Theorems, Filters, VTVM, CRO. Semiconductor Devices, diodes and transistors, FET, MOSFETS, UJT, Thermistors, Rectifiers, Power supply. Different types transistor based amplifiers and oscillators, Multivibrators, Logic gates and Boolean Algebra.

UNIT- IV

Crystal structure, Unit cell, Bravis lattices, Miller indices, X-ray diffraction, Bragg's law. Lattice vibrations: Free electron theory of metals, Distinction between conductors, semiconductors and insulators, Intrinsic and Extrinsic semiconductors.

Probability, Ensemble and average properties, Equilibrium and fluctuations, constraints, Equilibrium between two systems in thermal contact, the ß parameter, Entropy and probability Boltzmann entropy relation, Statistical interpretation of second law of thermodynamics. Maxwellian Distribution of Speeds in an ideal gas.

Bose-Einstein and Fermi-Dirac Statistics, Free electrons in a metal, photons in black body chamber, Fermi level and Fermi energy.

Structure of nucleus; Liquid drop model and semi empirical mass formula, nuclear reactions, nuclear fission and fusion, elementary particles. Artificial nuclear transmutation, Particle accelerators & detectors, α, β, γ. decay.

UNIT- V

Real analysis: continuity and discontinuity, Reimann Integral and its applications. Algebra of integral function, convergence and divergence. Different methods in Hydrodynamics in the equation of continuity in different systems. Equation of motion and Bernoulli's equation with different cases. Motion in 2D and its applications. Differential and Integral calculus: successive differentiation, Different form of theorems, Tangents and normal, Maxima and Minima with different cases. Various types of integral form, Beta and gamma functions.

Linear Algebra: Group, ring field, Integral domain and vector space with examples and theorems. Differential equations and Laplace transformation, vector analysis and Analytical Geometry, mechanics and complex analysis.

UNIT- VI

General Statistics, Probability Distributions, Test of Significance, Analysis of Variance, Sampling Theory, Design of Experiment, Time series Analysis, Index Numbers, Statistical Quality Control, Vital statistics, Statistical organizations in India.

UNIT- VII

Introduction to computers, fundamentals, peripherals of PCs, software and Hardware. Evolution. Operating system. Structural computer Languages: programming in C, UNIX, WINDOWS Operating Systems. Number systems and computer architecture.

Computational methods for Numerical Analysis: Algebraic and Transcendental equations, systems of simultaneous equations. Interpolation and Differentiation, solution of ordinary differential equations with initial value and boundary value problems.

UNIT- VIII

Electronic configuration of elements, periodic classification of elements, atomic number, atomic and ionic radii, ionization potential, electron affinity and electro negativity, electronic theory of valency, sigma and pi-bonds, hybridization and directional nature of covalent bonds, metallic bonds, VSEPR theory, V.B. and MO theory, ionic solids and weak interactions, Lewis and Bronsted theories of acids and bases, hard soft acid and bases (HSAB), oxidation states and oxidation number, common oxidizing and reducing agents, Ionic equations.

Natural and artificial radioactivity, radioactive decay, nuclear fission and fusion.

Chemistry of the common elements and their compounds. Principles of extraction isolation (and metallurgy) of important elements. Chemistry of transitional elements, lanthanides and actinides.

Structures of hydrogen peroxide, diborane, aluminium chloride and the important oxyacids of nitrogen, phosphorus, chlorine and sulphur. Interhalogen compounds.

Outlines of the manufactures of :sodium carbonate, sodium hydroxide, ammonia, nitric acid, sulphuric acid, cement, glass, ceramics and artificial fertilizers.

Inert gases: Isolation and Chemistry, structure of inert gas compounds.

Werner's theory of coordination compounds, V.B. and M.O. theory of bonding in metal complexes, electronic spectrum, magnetic and spectral properties of metal complexes. Organo metallic compounds.

Bioinorganic chemistry, biological role of alkaline earth metal ions, metalloporphyrins.

Analytical chemistry: Principles and methods of chemical analysis, principles involved in separation techniques, chromatography.

UNIT- IX

Modern concepts of covalent bonding, bond lengths, energy and bond angles, electron displacements, inductive, electromeric, mesomeric and hyper conjugative effects, resonance ad its applications to organic chemistry, tautomerism, effects of structure on chemical reactions, dissociation constants.

Mechanism of organic reactions: Types of reagents and organic reactions, reaction intermediates, product analysis, isotope effects, kinetic and stereo chemical studies.
Stereochemistry: Optical and geometrical isomerism, chirality, enantiomers, stereogenic centers, distereomers, resolution and recemization, relative and absolute configuration, sequence rules, E&Z and R&S nomenclature, concept of conformation and conformational analysis of ethane, butane and cyclohexane and sugars.
Chemistry and reactions of derivative of aliphatic and aromatic compounds including: Alkanes, alkynes and alkenes. arenes and aromaticity, benzene and polynuclear hydrocarbons, alkyl and aryl halides, S_N1, S_N2 and S_Ni reactions, nuclear and side chain reactions, aromatic substitutions reactions, elimination reactions. Aliphatic and aromatic alcohols and phenols, ethers and epoxides, aliphatic and aromatic aldehydes and ketones, aliphatic and aromatic carboxalic acids and their derivatives, aliphatic and aromatic amines and amides, synthetic applications of diazonium salts. Amino-acids.
Reactions and applications of organometallic compounds, Acetoacetic and malonic esters, Organic synthesis via enolates. Heterocyclic compounds, pyridine, quinoline, thiophene, furan and pyrole.
Important organic name reactions and rearrangements of synthetic importance.
Carbohydrates, classification and general reactions, glucose, fructose and amino acids and proteins, terpenoids and alkaloids. Polymers, dyes and pigment.
Theory and application of spectral techniques, UV, IR and NMR in structure elucidation of simple organic molecules.

UNIT- X

Elementary quantum mechanics
Gaseous states: Kinetic theory of gases and gas laws, Maxwell's law of distribution of velocities, Van der Waal's equation, Law of corresponding states, Liquefaction of gases, Ratio of Cp/C_V.
Thermodynamics: The first law of thermodynamics, Isothermal and adiabatic expansion, Enthalphy, heat capacities, Thermo chemistry –heats of reaction, formation, solution and combustion, Calculation of bond energies, Kirchhoff equation, Criteria for spontaneous changes, second law of thermodynamics entropy. Free energy, criteria of thermodynamic equilibrium.
Solutions: osmotic pressure lowering of vapour pressure, depression of freezing point, elevation of boiling point, determination of molecular weights, association and dissociation of solutes.
Chemical equilibrium, law of mass action and its applications to homogeneous and heterogeneous equilibrium, Le Chatelier's principle, Influence of temperature on chemical equilibrium.
Electrochemistry: Faraday's laws of electrolysis, conductivity of an electrolyte: equivalent conductivity and its variation with dilution, solubility of sparingly soluble salts, electrolytic dissociation, Ostwald's dilution law, anomaly of strong electrolytes, solubility product, strength of acids and bases: hydrolysis of salts, hydrogen ion concentration buffer action, theory of indicators.
Electrochemical cells: Reversible cells, standard hydrogen and calomel electrodes and redox-potentials, concentration cells, determination of pH transport number and ionic product of water, Potentiometerc titration, chemical kinetics: Molecularity and order of a reaction, First order and second order reactions, Determination of order of a reaction, temperature coefficients and energy of activation, ollision theory of reaction rates, Activated complex theory.
Phase rule: Explanation of the terms involved, Applications to one and two component system, reduced phase rule, distribution law.
Colloids: General nature of colloidal solutions and their classification, general methods of preparation and properties of colloids, coagulation, protective action, gold number, adsorption phenomenon and adsorption isotherms.
Catalysis: Homogeneous and heterogeneous catalysis, catalytic promoters and poisons.
Photochemistry: Law of photochemistry. Simple numerical problems.

Note: Questions from similar topics can also be included.

Appendix-X

SYLLABUS FOR ENTRANCE EXAMINATION OF MCA PROGRAMME

MENTAL APTITUDE: (50 questions)

The questions in this section will cover logical reasoning and quantitative aptitude. Some of the questions will be on comprehension of a logical situation and questions based on the facts given in the passage.

MATHEMATICS: (90 questions)

Set Theory: Concepts of sets Union Intersection Cardinality Elementary counting theorem permutations and combinations.
Probability and Statistics: Basic concepts of probability theory, Averages, Dependent and independent events, frequency distributions, measures of central tendencies and dispersions.
Algebra: Fundamental operations in Algebra, Expansions, Factorization, simultaneous linear & quadratic equations, indices, logarithms, arithmetic, geometric and harmonic progressions, determinants and matrices.
Coordinate Geometry: Rectangular Cartesian coordinates, distance formulae, equation of lines, intersections of lines, pair of straight lines, equations of a circle, parabola, ellipse and hyperbola.
Calculus: Limit of functions, Continuous function, Differentiation of function, tangents and normal, simple examples of maxima and minima. Integration of functions by parts, by substitution and by partial fraction; Definite integrals, Applications of Definite Integrals to areas.
Vectors: Position vector, addition and subtraction of vectors, scalar and vector products and their applications to simple geometrical problems and mechanics.
Trigonometry: Simple identities, trigonometric equations, properties of triangles, solution of triangles, heights and distances, General solutions of trigonometric equations.

COMPUTER AWARENESS: (30 questions)

Computer Basics: Organization of a Computer, Central Processing Unit (CPU), Structure of instructions in CPU, input/output devices, computer memory, back-up devices.
Data Representation: Representation of characters, integers and fractions, binary and hexadecimal representations, Binary Arithmetic: Addition, subtraction, multiplication, division, simple arithmetic and two's complement arithmetic, floating point representation of numbers, Boolean algebra, truth tables, Venn diagrams.

GENERAL ENGLISH: (30 questions)

Questions in this section will be designed to test the candidates' general understanding of the English language. There will be questions on the following topics:
Comprehension, Vocabulary, Basic English Grammar (like usage of correct forms of verbs, prepositions and articles), Word power, Synonyms and Antonyms, Meanings of words and phrases, Technical writing.

Note: Questions from similar topics could also be included.

DISTRIBUTION OF QUESTIONS IN THE PAPER:
The question paper will contain 200 multiple-choice questions distributed as follows:

1. Mental Aptitude	50 questions
2. Mathematics	90 questions
3. Computer Awareness	30 questions
4. General English	30 questions

Appendix-XI

FORMAT FOR FORWARDING OF THE APPLICATION FORM

From

……. **No. .....……**

……. **Date : ……..**

…….

To

The Controller of Examination,
G. B. Pant University of Agriculture & Technology,
Pantnagar-263145 (Uttarakhand)

Ref: _____

Sub: Sponsorship of Mr./Ms._____ for Masters'/Ph.D. _____Programme.

Sir,

This has reference to the application form No. _____ of Mr./Ms._____ admission to _____Programme in _____subject at your University as an in-service candidate. The complete application form is enclosed herewith/has already been sent alongwith relevant documents/papers for consideration under sponsored category. In case of his/her selection for admission in the above programme, he/she will be relieved as per rules of this Institution.

Yours faithfully,

( )

IMPORTANT INFORMATION AT A GLANCE

1. Online filling of Application form

(a) Online filing of application form for UG, Masters, MCA and Ph.D. : 18-04-2022 to 31-05-2022

(b) Online filing of application form for M.Tech. Programme and sponsored candidates for Masters', M.Tech. and Ph.D. programmes : 18-04-2022 to 31-05-2022

2. Dates of Editing/Correcting the online application form (if necessary) : 01-06-2022 to 07-06-2022

3. For downloading of Admit Cards : 15-07-2022 onwards

4. Date of Entrance Examination

(a) For Master' and Ph.D. Programmes : 30-07-2022 (Saturday)

(b) For Undergraduate Programmes and MCA Programme : 31-07-2022 (Sunday)

5. Scheduled Time of Examination

(a) For Master' and Ph.D. Programmes : 10.00 AM to 1.00 PM

(b) For Undergraduate Programmes and MCA Programme : 10.00 AM to 1.00 PM

6. Declaration of Result : On or before 15-08-2022

7. Counselling : Third/Fourth week of August 2022

8. Date of Registrations : To be announced later

9. Last date for Registration after first counselling : To be announced later

10. Second Counselling (Counselling fee as given in Chapter II section 24) : To be announced after the First counselling.
(No separate letter will be issued for second counselling).

11. Third counselling (Counselling fee as given in Chapter II section 24 : To be announced after the second counselling subject to availability of vacant seats

12. Application fee details

	Amount (Rs.)
For General/OBC	Rs. 1200.00
For SC/ST/PH	Rs. 600.00

FOR ANY OTHER INFORMATION CONCERNING ADMISSION PLEASE CONTACT:

THE CONTROLLER OF EXAMINATION
G. B. PANT UNIVERSITY OF AGRICULTURE & TECHNOLOGY,
PANTNAGAR - 263 145 (U.S. NAGAR) UTTARAKHAND

PHONE : (05944) 233407; 351211

FAX : (05944) 233473

WEBSITE/PORTAL : www.gbpuat.ac.in; www.gbpuat.in