

**SARDAR VALLABH BHAI PATEL UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, MEERUT – 250110 (U.P)**

**PROCEEDINGS OF FIFTH MEETING OF ACADEMIC COUNCIL HELD IN CONFERENCE HALL OF BIO-CONTROL LABORATORY COMPLEX AT 4.00 PM ON FEBRUARY 22, 2003**

**Following were present**

1	Dr. P.P. Singh	Vice – Chancellor/ Chairman
2	Dr. Kharag Singh	Prof. & Haed (Soil Science)/ C.P.O.
3	Dr. Y.P. Singh	Prof. & Head (Animal Science)
4	Dr. B.Ram	Professor
5	Dr. S.C. Sirohi	Prof. & Head (Horticulture)
6	Dr. Gajendra Pal	T.O.
7	Dr. Devi Singh	Prof. & Head (Genetics & Plant Breeding)
8	Dr. N.C. Gupta	SMS
9	Sri Om Prakash	SMS
10	Dr. H.S. Verma	Secretary/ Registrar

**Agenda**

**Agenda I** Confirmation of minutes of IVth meeting of Academic Council held on January 22, 2003.  
Minutes were confirmed.

**Agenda II** Election of Committees on (a) Educational Policy (b) Library  
Following members were elected un-opposed for the committees mentioned as under -

<b>Committee on Educational policy</b>		
Chairman	Dr. Kharag Singh	Proposed by Dr. Devi Singh Seconded by Dr. Gajendra Pal
Member	Dr. Y.P. Singh	Proposed by Dr. B. Ram Seconded by Dr. Devi Singh
Member	Dr. S.C. Sirohi	Proposed by Dr. Y.P. Singh Seconded by Sri Om Prakash
<b>Committee on Library</b>		
Chairman	Dr. B.Ram	Proposed by Dr. H.S. Verma Seconded by Dr. Gajendra Pal
Members	Dr. Devi Singh	Proposed by Dr. Gajendra Pal Seconded by Dr. Kharag Singh
Members	Dr. I.P. Singh	Proposed by Dr. B. Ram Seconded by Er. N.C. Gupta

### Agenda III

Names of degrees to be awarded by the University.

Following names for degrees to be awarded by the University were approved.

#### College of Agriculture

##### Graduate in Agriculture

Bachelor of Science (Agriculture)  
(B.Sc. (Ag.))

##### Master in Agriculture

###### Department of Agronomy

Master of Science (Agriculture) Agronomy  
(M.Sc. (Ag.) Agronomy)

###### Department of Soil Science

Master of Science (Agriculture) Soil Science  
(M.Sc. (Ag.) Soil Sci.)

###### Department of Animal Husbandary

Master of Science (Agriculture) Animal  
Husbandry  
(M.Sc. (Ag.) Anim. Husb.)

###### Department of Plant Pathology

Master of Science (Agriculture) Plant  
Pathology  
(M.Sc. (Ag.) Pl. Path.)

###### Department of Entomology

Master of Science (Agriculture) Entomology  
(M.Sc. (Ag.) Entomology)

###### Department of Genetics & Plant Breeding

Master of Science (Agriculture) Genetics &  
Plant Breeding  
(M.Sc. (Ag.) Gen. & Pl. Br.)

###### Department of Horticulture

Master of Science (Agriculture) Horticulture  
(M.Sc. (Ag.) Horticulture)

###### Department of Agric. Economics and Management

Master of Science (Agriculture)  
Agricultural Economics and Management  
(M.Sc. (Ag.) Agril. Economics & Mgt.)

###### Department of Agric. Commi. and Rural Development

Master of Science (Agriculture) Agriculture  
Communication and Rural Development  
(M.Sc. (Ag.) Agric. Comm. & Rural Dev.)

###### Department of Bio-Technology

Master of Science (Agriculture) Bio-  
Technology  
(M.Sc. (Ag.) Bio-Tech.)

**Ph.D.**

Department of Agronomy	Doctor of Philosophy (Agronomy) (Ph.D. (Agronomy))
Department of Soil Science	Doctor of Philosophy (Soil Science) (Ph.D. (Soil Sci.))
Department of Plant Pathology	Doctor of Philosophy (Plant Pathology) (Ph.D. (Plant Path.))
Department of Entomology	Doctor of Philosophy (Entomology) (Ph.D. (Entomology))
Department of Genetics and Plant Breeding	Doctor of Philosophy (Genetics and Plant Breeding) (Ph.D. (Gen. and Pl. Breeding))
Department of Horticulture	Doctor of Philosophy (Horticulture) (Ph.D. (Horticulture))
Department of Animal Science	Doctor of Philosophy (Animal Husbandry) (Ph.D. (Anim. Husb.))

**Agenda IV**

Qualification for Entrance Examination for admission to B.Sc. (Ag.) and M.Sc. (Ag.) degree programmes.

Following qualification of the candidates were decided to appear in Entrance Examination for admission to the degree programmes as given below-

**B.Sc. (Ag.)** Intermediate (10+2) in Agriculture or Science (Biology/ Math/ Bio-Math) (Passed or appearing)

M. Sc. (Ag.) Agronomy/ Soil  
Science/ Animal Husbandry/  
Plant Pathology/ Entomology/  
Genetics and Plant Breeding/  
Horticulture/ Agril. Economics  
and Management/ Agric.  
Communication and rural  
Development

**M.Sc. (Ag.) Biotechnology**

**Ph.D.** Agronomy/ Soil Science/  
Animal Husbandry/ Plant  
Pathology/ Entomology/  
Genetics and Plant Breeding/  
Horticulture

B.Sc. (Ag.) or B.Sc. (Ag. & A.H.) or B.Sc.  
(Ag.) Hons. with 60% marks or equivalent  
O.G.P.A.

Candidates appearing in final year/  
semester examination of the above degree  
programmes may also apply, but their  
candidature for admission shall only be  
considered if they obtain 60% or above  
marks in the qualifying degree  
programme.

B.Sc. (Ag.) or B.Sc. (Ag. & A.H.) or  
B.Sc. (Ag.) Hons. or B.Sc. (Biology) or  
B.Sc. (Bio-Math) or B.Tech. (Bio-Tech.)  
with 60% marks or equivalent O.G.P.A.

Candidates appearing in final year/ semester  
examination of the above degree  
programmes may also apply, but their  
candidature for admission shall only be  
considered if they obtain 60% or above  
marks in the qualifying degree programme.

M.Sc. (Ag.) in subject concerned with 60%  
marks or equivalent O.G.P.A.

Candidates appearing in final year/  
semester examination of the above degree  
programmes may also apply, but their  
candidature for admission shall only be  
considered if they obtain 60% or above  
marks in the qualifying degree programme.

A meeting of 22 Feb. 2003 held on

**Agenda V**

Amount of fees and other charges to be collected from students.

Following Fees/ Charges were decided to be charged from students of various degree programmes as under –

**Admission**

(Once at the time of admission to a degree programme)

	B.Sc. (Ag.)	M.Sc. (Ag.) & Ph. D.
Admission Fee	200.00	500.00
Security Money	500.00	1000.00
Medical Examination Charges	50.00	50.00
Hostel Security	3000.00	3000.00

**Annual Charges**

Magazine	25.00	25.00
I.D. card (Pass port size Photo of Student is needed)	25.00	25.00
Student Support	50.00	50.00
Examination Fees	500.00	500.00

**Semester Charges**

Registration	50.00	50.00
Tuition	4500.00	8000.00
Sports	200.00	200.00
Entertainment and Literature	100.00	100.00
Laboratory	300.00	1000.00
Miscellaneous Activities	50.00	50.00
Transcript	50.00	50.00
Library	100.00	100.00
Medical	100.00	100.00
Education tour and visit	50.00	50.00

**Hostel Charges**

Hostel Common Room (Per Semester)	100.00	100.00
Hostel Room Charge (Per Semester) (including electricity charges)	700.00	700.00

## Agenda VI

Syllabi for Entrance Examination for Admission to B.Sc. (Ag.), M.Sc. (Ag.) and Ph.D. Degree Programmes.

The following syllabi for the Entrance Examination were approved.

### B.Sc. (Ag.)

#### General Studies

It will include questions on General Knowledge, current affairs, reasoning aptitude etc.

**Agronomy** General Field Crops, Soils & Manures.

**General Field Crops** Study of Wheat, Paddy, Cotton, Sorghum, Pearl millet, Maize, Groundnut, Gram, Tobacco, Berseem, Potato and Sugarcane under the following heads-

Recommended varieties, suitable area in state, sowing time, seed rate, methods of sowing, manuring techniques, irrigation, harvesting, threshing and yield

**Soils** Genesis of soils, Classification of soils i.e. Gravels, Sandy, Loam, Silt and Clay, Physical properties of soil, Effect of rainfall on soil structure, Preliminary knowledge of calcareous and laterite soils of Uttar Pradesh, Basic Principles of different methods of soil conservation

**Manures and Manuring** Essential nutrients for plant growth, quantity of nitrogen, phosphorus and potash taken by principle field crops from the soil need of manuring, organic and inorganic manures and fertilizers. Conservation of Farm Yard Manure and compost, green manure crops and their utility.

**Study of the following manures** Farm yard manure (FYM), Compost, Urinated soils, Castor cake, Groundnut cake, Ammonium sulphate, Sodium nitrate, super phosphate, Potassium sulphate, Urea, Calcium Ammonium Nitrate, Ammonium Chloride and Mixed fertilizer

#### Irrigation and Drainage

Irrigation requirement, Water requirement of the crops, water discharge and its relationship with soil texture, measure to reduce misuse of water, quality of irrigation water and its effects.

**System and Methods of Irrigation** Flood irrigation, basin methods, furrow methods, sprinkler irrigation, lift irrigation – merits and limitations of each.

Measurement of irrigation water, 'V' notch orifice cusec, acre- inch, metric system of measurement

### Agricultural Engineering

- 1 Iron used in the construction of agricultural implements such as cast – iron liquid chilled cast – iron and properties of different grades of the carbon steel
- 2 **Ploughs** Types of ploughs, trouble in operation, precautions in adjustments, comparative study of the ploughs used in the state such as indigenous plough, Meston plough, Kare plough, Shabash plough, U.P.No. 2 Plough, Victory plough and Praja Plough.
- 3 **Other Implements** Cultivators, hoes, plank, scraper and seed drill, their care, adjustment cost and comparative study
- 4 **Drafts implements** Measurement, factors affecting the drafts, importance of the effect of the drafts in selecting power
- 5 **Water lifts** Discharge of water, lifts per hour, area irrigated per day and study of cost of irrigation per hectare, water lifts including swing basket, counterpoise lifts, don, Persian wheel, low lift pump and rope and bucket lifts
- 6 **Plough and tillage methods** Types, Chemical and Physical effect, effects of ploughing, clod crushing, harrowing and effect of interculture on soil structure. Tillage requirements of different crops
- 7 **Power Transmission** by belt, pulleys and gears, calculation of simple numerical on speed and size of pulleys and numbers of teeth on gears (neglecting belt slippage)
- 8 Study of hand chaff cutter, cane – crusher, winnowing fans and Olpad thresher

### Animal Husbandry & Dairying

Study of the description of main Indian breeds of animal viz cattle, buffalo, goat and sheep, external anatomy of cows and bullocks and its relation with body function; judging of age of cattle, characters of good milch cows and buffaloes, characters of bullocks, calves, heifers and bulls and their judging by score method, general principles of care and management of pregnant cows, downcalves, newly born calves, recently calved cows and milch cows, general

principles involved in feeding of different classes e.g. calves, heifers, bullcalves, pregnant cows, milch cow, bulls and bullocks general idea about cheap availability of fodder and grains for animals throughout the year, cleaning and preparation of cows for milking, general idea about cleaning and sanitation of milking sheds, principles and methods of milking and clean milk production, milk recording simple medicines used for treatment of animals and method of their use, control, casting and securing of animals for treatment/ castration of calves.

### Horticulture

Study of the following vegetable and fruit crops

Cole Crops (Cauliflower, Cabbage and knoll- khol) Bulb Crops (Onion)  
Cucurbits (Bitter gourd, Bottle gourd, Sponge gourd musk – Melon) Root  
crops (Carrot, Radish, Sweet Potato, Turnip) Legume (Pea) Spices (Chilli) other  
vegetable crops (Brinjal, Okra, Tomato) and Fruits (Banana, Apple, Lichi, Ber)

### Agricultural Botany

- 1 External morphology of plant organs stem, root, leaf and flowers, function of different plant parts and their modifications
- 2 Structure of flower, types, functions of its different parts; inflorescence, different types of inflorescence
- 3 Pollination, type of pollination and study of its mechanism
- 4 Seed structure and seed germination (typical germination of monocot and dicot seeds) type of seed, functions and dissemination of seeds
- 5 Types of fruits, their functions and dissemination
- 6 Internal morphology- structure of a typical cell, inclusion of a cell, cell division (somatic and meiotic), organisation of cells in the form of tissue, internal morphology of monocot and dicot root, stem and leaf, secondary growth and structure of dicot stem and root, structure of reproductive organs in Angiosperms
- 7 Plant Physiology (Only elementary study)
  - (a) Absorption of water by a plant structure of root hair
  - (b) Transpiration and root pressure, their functions and significance
  - (c) Carbon assimilation, structure and function of leaf stomata, factors influencing efficient carbon assimilation

- (d) Respiration, kind and function
- 8 Systematic Botany and elementary introduction of plant kingdom as far as possible the study of botanical (distinguishing characteristics of general plants found in locality and garden) description of plants belonging to families: graminae, cruciferae, leguminosae, cucurbitaceae and malvaceae
- 9 Elementary study of following plants
- (a) Moss (b) Fern (c) Mucor (d) Bacteria

### Agriculture Zoology

- 1 (a) General properties of protoplasm, structure of and animal cell, difference between living and non-living cell
- (b) Study of living beings through Amoeba and Paramecium like animals
- 2 External morphology, habit and study of the life history of (a) Non-chordates (Tapeworm, Earthworm, Cockroach, Silkworm, Honeybee and Termite), (b) Vertebrates- Frog, Pigeon (or any other bird) and squirrel (or any other Mammal)
- 3 Internal structure of Cockroach, Frog and Mammal
- 4 (a) Elementary knowledge of Anatomy, Histology and Physiology of stomach, lungs and kidney of a mammal, (b) General knowledge and physiology of digestion, respiration and excretion.
- 5 An elementary knowledge of animal kingdom – classification with characteristics of main phyla including reference to main classes of animals mentioned in para 2

### Agriculture Chemistry

#### A Physical Chemistry

Matter (solids, liquids, physical and chemical changes), elements, mixture and compounds, laws of chemical combination (numerical questions), atomic theory, modern and ancient theories (popular elementary ideas), definition, explanation and relationship of valency, atomic weight, molecular weight and equivalent weight, atomic structure avagadro's hypothesis and its applications, theory of ionization, oxidation and reduction, periodic classification of elements

## B Inorganic Chemistry

Water (temporary and permanent hardness, processing of making soft water from hard water, quality of water for irrigation purposes), study of elements and their compounds with special reference to their occurrence, properties and uses (nitrogen, ammonia, nitric acid, carbon dioxide, phosphorus, phosphoric acid, sulphur dioxide sulphuric acid, chloride and hydrochloric acid, sodium, sodium chloride, sodium hydroxide, sodium carbonate, sodium bicarbonate, sodium phosphate and sodium nitrate, aluminum, aluminum sulphate and aluminum phosphate)

## C Organic Chemistry

Formation of organic compounds, physical properties, general knowledge of classification and their nomenclature, simple method of naming, general formulae, general properties, important used and structural formulae of hydrocarbons alcohols, aldehydes and ketones, acids fats and oils, carbohydrates general method of preparation & general properties of benzene and phenol

### M.Sc. (Ag.) General Studies

It will include General knowledge, current affairs, reasoning, aptitude etc.

### Subject Studies

It will include all the compulsory courses as prescribed by I.C.A.R. for B.Sc. (Ag.) or B.Sc. (Ag. & A.H.) or B.Sc. (Ag.) Hons, (Four year Course) as described on page 14 for MAG.

### Ph.D.

There will be 50 questions of General Studies, 30 questions of Statistics and 120 questions of concerned subject as prescribed by Indian Agril. University of their master's degree courses. The detail syllabus for statistics is given as below.

### Syllabus for Statistics

Measures of central tendency and dispersion, Skewness and kurtosis, Probability, Normal distribution (properties only); Test of significance (t, Z, f and  $X^2$  - test),

Regression and correlation (including partial and multiple correlations with their test of significance), Sampling theory with reference to crop estimation survey (random, stratified and multistage sampling). Analysis of variance, Principles of experimental designs, Completely Randomized Design, Randomized Block Design, Latin Square Design, Factorial Experiments ( $2^3$  factorial experiments), Split plot Design, Analysis of Covariance; Missing plot Technique (in R.B.D. and L.S.D. with one value missing)

## **Agenda VII**

System for Grading, Continuance, Academic Probation and Evaluation of Under Graduate and Post Graduate students.

The following system was approved.

### **Passing of Course (s)**

For passing a course, a Under – Graduate student shall have to earn minimum 5.000 points. In case of post – Graduate students (both Master's & Ph.D.), he / she shall have to earn minimum 6.000 point for passing a course.

### **Continuance of studies / Academic Probation**

#### **UG Programmes**

For continuance in the university a undergraduate student shall maintain a CGPA of 5.500 out of 10.000.

If at the end of any semester of an academic year the CGPA (GPA in case of Ist year students at the end of I Semester of their study) of an undergraduate student falls below 5.500 he/she shall be placed on Academic Probation for the duration of the following semester.

If at the end of the semester during which an undergraduate student has been on Academic Probation, the CGPA of the student for that semester is 5.500 or above, he/she shall cease to be on Academic Probation.

#### **PG Programmes**

For Continuance in the university a postgraduate student shall maintain a minimum CGPA of 6.500 out of 10.000 in case of Master's and 7.250 out of 10.000 in case of Ph.D. programme in each semester in 500 and higher series of courses included in his/her programme of studies.

If at the end of any semester the CGPA of any postgraduate student falls below 6.500 in case of Master's and 7.250 in case of Ph.D. programmes out of 10.000 in 500 and higher series courses included in his/her programme of studies, he/she shall be placed on Academic Probation for the duration of the following semester.

If at the end of any semester during which a postgraduate student has been on Academic Probation, the CGPA of the student for that semester in 500 and higher series courses is 6.500 in case of Master's and 7.250 in case of Ph.D. programmes or above out of 10.000 he shall cease to be on Academic Probation.

### **Dropping from the University**

#### **UG Programme**

If any undergraduate student fails to maintain CGPA of 5.500 at the end of academic year he/she shall be dropped from the University for poor academic performance with the right to petition for readmission. However, the students with the CGPA less than 4.000 shall finally be dropped from the university with no right to petition for readmission.

#### **PG Programmes**

If at the end of any semester during which a postgraduate student has been on academic probation, the CGPA of the student in 500 and higher series 5s courses falls below 6.500 out of 10.000 in case of Master's and 7.250 out of 10.000 in case of Ph.D. programmes he/she shall be dropped from the University for poor academic performance with a right to petition for readmission. However, a student with the CGPA less than 5.000 in case of Master's and less than 6.000 in case of Ph.D. programmes shall finally be dropped from the university with no right to petition for readmission.

#### **Evaluation**

Each student shall be examined in every course from time to time through the semester. While examine the students, the Instructor shall mark individual questions in numerical upto two decimal digits (no rounding of) and then convert the total marks obtained into points dividing by 10, as per example given below:

% age of Marks	Points
55.25	5.525
56.90	5.690
65.00	6.500
70.00	7.000

(The Points in a course will be total marks obtained by a student out of 100, divided by 10.)

The Points so secured in course (s) will be "Points in a course (s) X Credit(s) of the course(s)".

The following shall be the formula for calculating the GPA/ CGPA/ OGPA:

$$\begin{aligned} \text{G.P.A.} &= \frac{\text{Total Points Secured}}{\text{Course Credits}} \\ \text{C.G.P.A.} &= \frac{\text{Total Points Secured}}{\text{Course Credits}} \\ \text{O.G.P.A.} &= \frac{\text{Total Points Earned}}{\text{Course Credits}^*} \end{aligned}$$

(\*After excluding failure points)

Furthermore, on the basis of OGPA the degree / division will be awarded as per the following:

Undergraduate: Programmes	5.500- 6.999	II Division
	7.000 -8.499	I Division
	8.500 or above	I Division with Distinction **
Master's Programmes	6.500-7.249	II Division
	7.250 -8.249	I Division
	8.250 or above	I Division with Distinction**
Ph.D. Programmes	7.250 (However, no division shall be awarded)	

(\*\* Provided that he/she had cleared all the courses in the first attempt.)

**Agenda VIII**

Permission to the university teachers to be Co-Guide of Post Graduate students of other universities.

It was passed that a teacher of the university may be Co-Guide maximum of two PG students of other universities.

**Agenda IX**

Starting Ph.D. degree programmes in the University.

It was decided to start following Ph.D. degree programmes with two seats in each department w.e.f. IInd Semester 2002 – 03

- Ph.D. (Soil Science) (with minors in Agronomy)
- Ph.D. (Agronomy) (with minors in Soil Science)
- Ph.D. (Horticulture)
- Ph.D. (Plant Breeding)
- Ph.D. (Plant Pathology) (with minor in Entomology)
- Ph.D. (Entomology) (with minor in Plant Pathology)
- Ph.D. (Animal Husbandary)

The meeting ended with vote of thanks to the Hon'ble Chairman.