Government Shivalik College Naya Nangal

BSc Medical/ Non medical Sem-IV

Session 2022-23

Sr	Board University Roll No	Roll No	Student Name	Father Name	Project allocated
1	464165	3801	ABHISHEK KUMAR	OM PARKASH	**Composition of pain killer**
2	464159	3802	HARPREET SINGH	SARUP SINGH	
3	464156	3803	KARAN DEV	MAHINDER SINGH	
4	464141	3804	VISHAL	SATPAL	
5	464163	3805	ANMOL RANA	SANJEEV KUMAR	
6	464135	4001	BHAVNA DEVI	SHAM SUNDER	**Composition of cosmetics**
7	464133	4002	DISHA KUMARI	GURBAX SINGH	
8	464129	4003	ISHA RANI	DAVINDER KUMAR	
9	464127	4004	JASMEEN CHECHI	NARESH KUMAR	
10	464126	4005	JASWINDER KAUR	PREM SINGH	
11	464116	4006	NIKITA SHARMA	SANDEEP KUMAR	
12	464111	4007	RUCHI DEVI	JAGTAR SINGH	
13	464118	4008	MRIDUL RATTAN	GANESH RATTAN	
1	464164	5002	AKASH SHARMA	RAM KISHAN	**Composition of pain killer**
2	464151	5010	PRINCE	JASBIR SINGH	
3	464149	5012	ROHIT KUMAR	DHARAMVEER	
4	464144	5016	SUMIT KUMAR	SUNIL DUTT	
5	464142	5018	VIKRAMJIT SINGH	AMARJIT SINGH	
6	464140	5201	AARTI	PARVEEN KUMAR	
7	464137	5202	ANJALI	ANIL KUMAR	
8	464138	5203	ANJALI	KULWINDER SINGH	
9	464136	5204	BAKHSHO DEVI	TARSEM LAL	
10	464134	5205	DAMNI RANI	KULDEEP SINGH	
11	464131	5207	HARDEEP KAUR	MOHINDER SINGH	
12	464130	5208	HARSHPREET KAUR	HARPAL SINGH	

13	464124	5209	KAMNA NAIR	GURDIAL CHAND	**Composition of cosmetics**
14	464123	5210	KIRANDEEP KAUR	GURPREET SINGH	
15	464122	5211	MANI THAKUR	RAKESH KUMAR	
16	464121	5212	MANPREET KAUR	TARSEM LAL	
17	464153	5213	MANPREET KAUR	GURNAIB SINGH	
18	464120	5214	MEENAKSHI	JEEVAN KUMAR	
19	464119	5215	MEHAK	VARINDER KUMAR	
20	464107	5220	SANJANA	JASWINDER KUMAR	
21	464106	5221	SAPNA DEVI	DEV SINGH	
22	464104	5222	SIMRANJIT KAUR	RANVIR SINGH	
23	464102	5223	SUNAINA	RAKESH KUMAR	
24	464103	5225	SONAKSHI	ROOP LAL	

Punjabi University, Patiala, B.Sc. Part-III (Sem.V & VI)

Subject Chemistry

B.Sc. III, Semester VI

INSTRUCTIONS FOR EXAMINERS AND CANDIDATES

Candidate are required to prepare perform column Chromatography experiment and the physical experiments. The candidate will perform experiments from physical, chemistry. Distribution of marks will be as under:

1. Viva-Voce = 10
2. Note Books = 5
3. Column Chromatography = 5
4. **Models = 5**
5. Physical Experiments = 20* (5 for initial write up both experiments)

Laboratory Techniques

1. Column Chromatography
2. Separation of fluorescein and methylene blue.
3. Separation of leaf pigments from spinach leaves.
4. Physical Experiments

(a) To determine the strength of the given acid conductometrically using standard alkali solution.

(b) To determine the solubility and solubility product of a given sparingly soluble electrolyte conductometrically.

(c) To study the saponification of ethyl acetate conductometrically.

(d) To determine the ionisation constant of a weak acid conductometrically.

(e) To determine the strength of the given acid solution pH- metrically by using standard alkali solution.

(f) To determine the molar refraction of methanol, ethanol and propanol.

(g) To study the distribution of benzoic acid between benzene and water, and ether and water.

(h) Knowledge of Stereochemical Study of Organic Compounds.

Rand S configuration of optical isomers.

E, Z configuration of geometrical isomers.

Conformational analysis of cyclohexanes and substituted cyclohexanes.

Punjabi University, Patiala, B.Sc. Part-III (Sem.V & VI) Subject Botany

SUGGESTED READINGS FOR LABORATORY EXERCISES IN PLANT ECOLOGY AND PLANT UTILIZATION

1. To determine minimum number of quadrats required for study of a grassland.
2. To study the frequency of herbaceous species in grassland and to compare the frequency distribution with Raunkiaer's Standard Frequency Diagram.
3. To estimate Importance Value Index (IVI) for grassland species on the basis of relative frequency, relative density and relative biomass in protected and grazed grassland.
4. To measure the vegetation cover of a grassland through point frame method.
5. To measure the above ground plant biomass in a grassland.
6. To determine Kemp's constant for dicot and monocot leaves and to estimate the leaf area index of a grassland community.
7. To determine diversity indices (Richness, Simpson, Shannon Wiener) in grazed and protected grassland.
8. To estimate bulk density and porosity of grassland and woodland soil.
9. To determine moisture content and water holding capacity of grassland and woodland soil.
10. To study the vegetation structure through profile diagram.
11. To estimate transparency, pH and temperature of different water bodies.
12. To measure dissolved oxygen content in polluted and unpolluted water samples.
13. To estimate salinity of different water samples.
14. To determine the per cent leaf area injury of different leaf samples collected around polluted sites.
15. To demonstrate dust holding capacity of the leaves of different plant species.
16. Food Plants: Study of the morphology, structure and simple micro chemical tests of the food storing tissues in rice, wheat, maize, potato and sugarcane. Microscopic examination of starch in these plants (excepting sugarcane).
17. Fibres: Study of cotton flower, sectioning of the cotton ovules/developing seeds to trace the origin and development of cotton fibres. Microscopic study of cotton and test for cellulose. Sectioning and staining of jute stem showing the location and development of fibres. Microscopic structure. Tests for ligno-cellulose.
18. Vegetable Oils: study of hand sections of groundnut, mustard and coconut and staining of oil droplets with Sudan III and Sudan Black.
19. Field Visits: To study sources of firewood (10 plants), timber-yielding trees (10 trees) and bamboos. A list to be prepared mentioning special features.
20. Spices: Examine Black pepper, cloves, cinnamon (hand sections) and open fruits of cardamom and describe them briefly.
21. **Prepartion of an illustrated inventory of 10 medicinal plants and use their in indigenous systems of medicine of allopathy: Write their botanical and common names, parts used and diseases/disorders for which they are prescribed.**
22. Beverages: Section of boiled coffee beans and tea leaves to study the characteristic structural features.

INSTRUCTIONS FOR PAPER SETTER

PRACTICAL PAPER-VI (PERTAINING TO THEORY XI & XII)

Marks

1) Section cutting and preparation of slide of any economically important 06 plant/part and show to the examiner

2) Write up about the requirements, procedure and precautions for an ecological 05 experiment

3) Write up about the requirements, principle and procedure of anyecological 06 experiment. Show results to the examiner

4) Identification of four spots/specimens/slides giving at least two reasons. 08

5) Field Report 05

6) viva-voce 05

7) Note Book 05

4 0 Marks

B. A./B.Sc. PART-III (SEMESTER -VI)
SESSION for 2019-20, 2020-21, 2021-22
PRACTICAL GEOGRAPHY: FIELD METHODS IN GEOGRAPHY

Max. Marks: 40 Time Allowed: 6 Hours
Pass Marks: 35% (2 sessions of 3 Hours each)

Session-I (Morning)
Total Marks: 18 (Theory paper) Time: 3 Hours

Four exercises should be given, out of these, candidate is required to attempt any three. Each exercise will carry six marks. The paper will be set by the examiner at the centre on the spot.

Session-II, Evening (Field Survey & Practical Record)
Total Marks: 22 Time: 3 Hours
Total Lectures: 27
Distribution of Marks

Field Report	15 Marks
Viva-voce	07 Marks

SECTION-A

Fieldwork: (Theory)	(i)	Nature Scope, Objective and Significance of Field Studies. (3 Lectures)
	(ii)	Role of fieldwork in geography. (3 Lectures)
	(iii)	Scale of study and fieldwork methodology. (3 Lectures)
	(iv)	Methods of field study of: a farm, a village, and a town. (3 Lectures)

SECTION-B

	(v)	Type of Data in Geography: Primary and Secondary. (3 Lectures)
	(vi)	Methods of collecting primary data: questionnaire, observation and measurement. (3 Lectures)

Fieldwork (Practical): A field report of 10 to 15 written pages will be prepared based on primary data on problems such as (a) local market survey, (b) service area of school/hospital; (c) traffic flow, and (d) socio-economic characteristics of students/village/mohalla/sector. (9 Lectures)

BOOKS RECOMMENDED

1. Archer, J.E. & Dalton, T.H. : *Fieldwork in Geography,* E.T. Bastford Ltd., London, 1968..
2. Hudson, F.S. : *A Geography of Settlements,* MacDonald, London, 1970.
3. Jones, P.A. : *Fieldwork in Geography,* Longman, London, 1968.
4. Kellaway, George P. : *Map Projections,* Methuen and Co., London.
5. Singh, Gopal : *Mapwork and Practical Geography,* Surjeet Book Depot, Delhi, 1993.
6. Singh, L.R. and Singh, Raghunandan : *Mapwork and Practical Geography, Central Book Depot, Allahabad, 1993, Reprint.*
9. Steers, J.A. : *Map Projections,* University of London Press, London.

Punjabi University, Patiala, B.Sc. Part-III (Sem.V & VI) Subject Zoology

LIST OF PRACTICALS

1. Identification of food stuffs: starch, glucose, proteins and fats in a given solution.
2. Demonstration of osmosis and diffusion.
3. Demonstration of presence of amylase in saliva, denaturation with change of pH and temperature.
4. Analysis of urine for urea and glucose.
5. Determination of coagulation and bleeding time of blood in man.
6. Determination of blood groups of human blood sample.
7. Recording of blood pressure of man.
8. Estimation of haemoglobin content.
9. Preparation of slide to study TLC and DLC.
10. Preparation and study of human blood smear.
11. Study of permanent mount of striated muscles.
12. Study of permanent mount of myelinated nerve fibre.

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13. Identification of permanent histological sections of mammalian thyroid; Parathyroid, adrenal, hypothalamus, pituitary, pancreas and gonads.

14. Field study: Visit to a clinical lab.

INSTRUCTIONS FOR PRACTICAL PAPER

Max. Marks: 40 Time Allowed: 3 hours

Pass Marks: 35%

1. Biochemistry Experiment out of Experiment No. 1-4
2. Physiology Experiment out of Exp. No. 5-8
3. Preparation, Study & Sketch of slide out 9-10
4. Identification of 2 slides out of 11-13.

5. Lab Visit report

6. Viva-voce 3
7. Note Book 3