

PANJAB UNIVERSITY CHANDIGARH



(Established under the Panjab University Act VII of 1947 Enacted by
the Government of India)

PH.D. -2024 ENTRANCE TEST TO BE HELD ON 25-08-2024 (Sunday)

**Last date for submission of information on the website to
generate Login ID and Password: 09-08-2024 (Friday)**

Website: <http://phdadmissions.puchd.ac.in>

FEE (Non-refundable):

General Category Rs. 2520/-
SC/ST/PwD Category Rs. 1260/-
Additional Paper Rs. 1000/-

(If the candidate applies for UBS and UIAMS both)

PANJAB UNIVERSITY ANTHEM

<p>तमसो मा ज्योतिर्गमयः तमसो मा ज्योतिर्गमयः तमसो मा ज्योतिर्गमयः तमसो मा ज्योतिर्गमयः पंजाब विश्वविद्यालय तेरी शान-ओ-शौकत सदा रहे मन में तेरा आदर मान और मोहब्बत सदा रहे पंजाब विश्वविद्यालय तेरी शान-ओ-शौकत सदा रहे तू है अपना भविष्य विधाता पंख बिना परवाज़ सिखाता जीवन पुस्तक रोज़ पढ़ा कर सही गलत की समझ बढ़ाता जीवन पुस्तक रोज़ पढ़ा कर सही गलत की समझ बढ़ाता तेरी जय का शंख बजायें रौशन तारे बन जायें वखरी तेरी शोहरत तेरी शोहरत सदा सदा रहे पंजाब विश्वविद्यालय तेरी शान-ओ-शौकत सदा रहे पंजाब विश्वविद्यालय तेरी शान-ओ-शौकत सदा रहे तमसो मा ज्योतिर्गमयः तमसो मा ज्योतिर्गमयः</p>	<p>Tamso ma jyotirgamaya Tamso ma jyotirgamaya Tamso ma jyotirgamaya Tamso ma jyotirgamaya Panjab vishaw vidyalaya Teri shaan-o-shauqat sada rahe Mann mein tera aadar maan Aur mohabbat sada rahe Panjab vishaw vidyalaya Teri shaan-o-shauqat sada rahe Tu hai apna bhavishya vidhata Pankh bina parwaaz sikhata Jeevan pustak roz padha kar Sahi galat ki samajh badhata Jeevan pustak roz padha kar Sahi galat ki samajh badhata Teri jai ka shankh bajayein Roshan tare ban jaayein Vakhari teri shohrat Teri shohrat sada sada rahe Panjab vishaw vidyalaya Teri shaan-o-shauqat sada rahe Panjab vishaw vidyalaya Teri shaan-o-shauqat sada rahe Tamso ma jyotirgamaya Tamso ma jyotirgamaya</p>
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CONTENTS

Contents	Page No.
Important Dates / Information for Entrance Test	04
Important Notes	05
General Information	06-09
Procedure for Admission to Ph.D. Programme	10
Eligibility criteria for admission to Ph.D. Programme	10-12
Exemption from Entrance Test for Enrolment to Ph.D.	12 - 13
Scheme of Test	13
Result	13
Interview	14
Fellowship	14
Reservation Procedure	14
General Rules	15-17
Syllabus of Faculty of Business Management and Commerce	18-25

IMPORTANT DATES / INFORMATION FOR ENTRANCE TEST-2024

Date of availability of Ph.D. Prospectus and Online Entrance Test Form on the website of Panjab University, Chandigarh	15-07-2024 (Monday)
Last date for submission of information on the website to generate the Login ID and Password	09-08-2024 (Friday)
Last date for deposit of fee through Online Mode	11-08-2024 (Sunday)
Last date for uploading of photograph, signature with rest of the information on the website https://phdadmissions.puchd.ac.in	13-08-2024 (Tuesday)
Last date for submission of printout of form along with required documents for claiming the concession of Entrance Test Fee for SC/ST/PwD/PU Employee to Assistant Registrar, CET Cell, Aruna Ranjit Chandra Hall, Panjab University, Chandigarh - 160014 by registered post / speed post or by hand	19-08-2024 (Monday)
<u>Final date by which Roll No. Will be available online</u> Roll No. And Centre of Examination will be generated and Roll No. Slip required to be downloaded from the website by the candidate using their own Login and Password. <u>There will be no physical communication for this purpose.</u>	20-08-2024 (Tuesday)
Candidates who have not completed their form but have paid their requisite fee, can complete their form by paying (from 10:00 a.m. to 4:00 p.m.) late fee of Rs. 500/-	22-08-2024 (Thursday)
Date of Holding Entrance Test	25-08-2024 (Sunday)
Uploading of Answer Key and inviting Objections (through e-mail to arcet@pu.ac.in)	16-09-2024 (Monday)
Last day of submission of objections to the Answer key	18-09-2024 (Wednesday)
Uploading of the response to the Objections and inviting Cross-objections (through e-mail only)	23-09-2024 (Monday)
Last day of submission of Cross-objections to the Answer key	25-09-2024 (Wednesday)
Date of declaration of result	16-10-2024 (Wednesday) The result will be posted on the P.U. website https://results.puchd.ac.in and the same could be downloaded. No separate result cards will be issued to the candidates by the office.
Centre for Entrance Test	Chandigarh Only

<u>DATE SHEET</u>		
Date & Day	Paper	Time
25-08-2024 (Sunday)	Paper-I (Objective type)	10.00 a.m. – 11.00 a.m.
	Paper-II (Subjective type)* (For all faculties except UIAMS deptt.)	11.30 a.m. – 1.30 p.m.
	Paper-II (Subjective type)** (FOR UIAMS Department Only)	2.30 p.m. – 4.30 p.m.

* in case student of UIAMS wants to appear, they must opt an option from UBS.

** in case student of UBS wants to appear, they must opt an option from UIAMS.

*** A student can appear in both the exams for UBS and UIAMS.

IMPORTANT NOTES

1. The Fee for Ph.D. Entrance Test is Rs. 2520/- (Rs. 1260/- for SC/ST/PwD). The fee for the Entrance Test, once paid, shall not be refunded.
2. Class B/C Regular Employee of PU must send the copy of printout of their Entrance Test Form along with Performa for claiming 50% concession to P.U. Regular Employees ("B" and "C" Class) duly signed by Head/Chairperson to **Assistant Registrar, CET Cell, Aruna Ranjit Chandra Hall, Panjab University, Chandigarh-160014** by registered post/speed post or by hand on or before **16-08-2024 (Friday)** upto 4:00 p.m.
3. Only the candidates, who have passed or are appearing in the qualifying examination for a particular Course can apply for the Entrance Test.
4. The Syllabus for Ph.D. Entrance Examination will be as prescribed for Master's Degree or equivalent classes of Panjab University in the relevant subject.
5. **Special arrangements for amanuensis (writer of Answer):**
A candidate may be allowed help of an amanuensis (writer) if he/she is:
 - (i) Blind
OR
 - (ii) Permanently disabled from writing with his/her own hand.
 - (iii) Temporarily disabled from writing on account of fracture of the right or left arm, forearm or dislocation of a shoulder elbow or wrist etc. The candidate shall produce a certificate from a Professor of the speciality concerned of a Medical College and where there is no Medical College, from the Chief Medical Officer of the District concerned to the effect that the candidate is unable to write his/her Answer-books because of the temporary disablement.
6. 20 minutes extra per hour would be given to the visually handicapped / PwD candidates for each paper.
7. Candidates securing equal marks shall be bracketed together. Their **inter-se** merit will be determined by the Institution in accordance with the following criteria:
 - (i) A candidate getting higher percentage of marks in the qualifying examination shall rank higher in order of merit.
 - (ii) That if the marks in qualifying examination are also the same then the candidates obtaining more marks in the immediate lower examination, shall rank higher in order of merit.
 - (iii) That if two or more candidates secure equal marks in (i) & (ii) above, candidate senior in age shall rank higher in the order of merit.
8. The result of the Entrance Test will be available at <http://results.puchd.ac.in>. **No separate Result Cards will be issued.**
9. **Candidates can deposit their Admission Form for Ph.D. only after the declaration of the result of the Ph.D. Entrance Test-2024.**

PANJAB UNIVERSITY, CHANDIGARH

GENERAL INFORMATION

The Panjab University, Chandigarh will hold an Entrance Test for enrolment to Ph.D. in the Faculties of Arts, Business Mgt. & Commerce; Design & Fine Arts, Engineering, Education, Languages, Laws; Pharmaceutical Sciences and Science.

Faculty of Arts

<u>Sr. No.</u>	<u>Name of the Department / College</u>	<u>Subject</u>	<u>No. of slots for Ph.D. (subject to change)</u>
1	Department of Ancient Indian History, Culture & Archaeology	Ancient Indian History & Archaeology	03
2	Department of Economics CRRID, Sector 19, Chandigarh	Economics	05 03
3	Department of Gandhian and Peace Studies	Gandhian and Peace Studies	03
4	Centre for Police Administration	Police Administration	01
5	Department of Political Science Department of Evening Studies – Multi Disciplinary Research Centre	Political Science	Gen. 05; SC 01; ST 01 01
6	Department of Public Administration	Public Administration	02
7	Department of Guru Nanak Sikh Studies, P.U.	Sikh Studies	02

Faculty of Science

<u>Sr. No.</u>	<u>Name of the Department / College</u>	<u>Subject</u>	<u>No. of slots for Ph.D. (subject to change)</u>
1	Department of Anthropology	Anthropology	03
2	Department of Biochemistry	Biochemistry	02
3	Department of Botany	Botany	Gen. 10; SC 02; ST 01; BC 01; PwD 01
4	Department of Bio-Physics	Bio-Physics	Gen. 08; SC 02; ST 01; BC 01; PwD 01
5	Department of Chemistry S.D College Sec 32 Chandigarh DAV College, Abohar	Chemistry	Gen. 26; SC 06; ST 03; BC 02; PwD 02
6	UIET, Sector 25, Chandigarh	Chemistry	01
7	Deptt. of Geology	Geology	Gen. 17; SC 04; ST 02; BC 01; PwD 01
8	Govt. Home Science College, Sector 10, Chandigarh	Home Science	05
9	Department cum National Centre for Human Genome Studies & Research	Human Genomics	Gen. 06; SC 02; ST 01; BC & /or PwD 01
10	Department of Microbial Biotechnology	Microbial Biotechnology	02

11	Department of Microbiology	Microbiology	02
12	Centre for Nanoscience & Nanotechnology	Nanoscience & Nanotechnology	04
13	UIET, Sector 25, Chandigarh	Physics	05
14	Department of Statistics	Statistics	02
15	Centre for Stem Cell Tissue Engineering and Biomedical Excellence	Stem Cell Tissue Engineering and Biomedical Excellence	01
16	Department of Zoology	Zoology	Gen. 07; SC 02; ST 01; BC 01; PwD 01
	Research Centre in Zoology, PG Department of Zoology, DAV College, Sector 10, Chandigarh		Gen. 23; SC 05; ST 03; BC 02; PwD 02

Faculty of Business Management & Commerce

Sr. No.	Name of the Department / College	Specialization	No. of slots for Ph.D. (subject to change)	Add. Seats academic session 2023-2024
1	University Business School, Panjab University, Chandigarh	Finance & Accounting	04 (Gen) 01 (SC) 01 (PWD)	ST-01
		Human Resource	05 (Gen) 01 (SC)	
		Marketing	05 (Gen) 01 (ST)	PWD-01
		Strategic Management	01 (Gen) 01 (SC) 01 (ST)	SC-01
		Business Economics / Information Systems / Operations	02 (Gen) 01 (SC) 01 (BC)	
2	Department of Evening Studies- Multi-disciplinary Research Centre	Human Resource	01 (Gen.)	
3	Centre for Distance and Online Education (CDOE)	Human Resource	01 (Gen)	
4.	Panjab University Regional Centre, Ludhiana	Finance & Accounting	01 (Gen)	
		Marketing	01 (Gen)	
5.	GGDSD College, Sector 32, Chandigarh	Finance & Accounting	01 (Gen)	
		Marketing	01 (Gen)	
6.	University Institute of Applied Management Sciences	Retail Management	03 (Gen); 01 (SC)	
		Banking & Insurance Management	03 (Gen); 01 (SC)	
		Capital Markets	02 (Gen); 01 (ST)	
		Information Systems	03 (Gen); 01 (ST)	
		Infrastructural Management	02 (Gen); 01 (BC)	
		Healthcare Management	02 (Gen); 01 (SC); 01 (PwD)	
7.	University Institute of Hotel and Tourism Management	Hotel Management	03 (Gen); 01 (SC)	
		Tourism Management	04 (Gen); 01 (SC); 01 (ST)	

- (i) The Course work for all the above-said seats would be conducted at UBS/ concerned department, P.U., Chandigarh.
- (ii) The above-mentioned seats are exclusive to each department/institute/Regional Centre. The candidates who have been offered seats would be required to opt for a Research Supervisor from the concerned department/institute/Regional Centre only. However, the Co-Supervisor, if need be, can be opted by the candidate from anywhere.
- (iii) Synopsis Presentation would be required to be made by candidates (who have successfully completed the Pre-Ph.D. Course Work) before the members of the Research Board and respective Research Advisory Committee in UBS, P.U. Chandigarh.

Faculty of Languages

<u>Sr. No.</u>	<u>Name of the Department / College</u>	<u>Subject</u>	<u>No. of slots for Ph.D. (subject to change)</u>
1	School of Punjabi Studies, P.U.	Punjabi	Gen. 10; SC 02; ST 01; BC 01; PwD 01
	Department of Evening Studies- Multi-disciplinary Research Centre	Punjabi	04
2	Visveshvaranand Vishvabandhu Institute of Sanskrit & Indological Studies, Hoshiarpur	Sanskrit	03

Faculty of Design and Fine Arts

<u>Sr. No.</u>	<u>Name of the Department / College</u>	<u>Subject</u>	<u>No. of slots for Ph.D. (subject to change)</u>
1	Department of Music	Vocal & Instrumental	Gen. 05; SC 01
	P.G.G.C.G., Sector 11, Chandigarh	Vocal & Instrumental	Gen. 05; SC 01

Faculty of Engineering

<u>Sr. No.</u>	<u>Name of the Department / College</u>	<u>Subject</u>	<u>No. of slots for Ph.D. (subject to change)</u>
1	University Institute of Engineering and Technology	Computer Science Engineering	38
		Information Technology	27
		Biotechnology	12
		Mechanical Engineering	60
		Electrical and Electronics Engg.	37
		Electronics and Communication Engg.	26
	TOTAL	206 (140 + 31 SC + 15 ST + 10 BC +10 PwD)	
2.	Dr. S.S.B. UICET, P.U., Chandigarh	Chemical Engineering	23
		Management	05
		Food Technology	04
		Industrial Chemistry	02
	TOTAL	Gen. 23; SC 05; ST 02; BC 02; PwD 02	

3	Chandigarh College of Engineering & Technology, Sector 26, Chandigarh	Computer Science Engineering	43
		Mechanical Engineering	19
		Civil Engineering	07
		Electronics & Communication Engineering	50

Faculty of Pharmaceutical Sciences

<u>Sr. No.</u>	<u>Name of the Department / College</u>	<u>Specialisation</u>	<u>No. of vacant seats</u>	<u>Reserved seats of SC/ST/BC/PwD</u>
1	University Institute of Pharmaceutical Sciences	Pharmaceutics, Pharmaceutical Analysis and Pharmaceutical Quality Assurance	05	SC-01
		Pharmaceutical Chemistry, Pharmaceutical Analysis and Pharmaceutical Quality Assurance	16	SC-03, ST-02, BC-01, PwD-01
		Pharmacology	01	
		Pharmacognosy, Pharmaceutical Analysis and Pharmaceutical Quality Assurance	05	SC-01
TOTAL		General: 27, SC: - 05; ST-02; BC-01; PwD-01		

Faculty of Education

<u>Sr. No.</u>	<u>Name of the Department / College</u>	<u>Subject</u>	<u>No. of slots for Ph.D. (subject to change)</u>
1	Department of Physical Education	Physical Education	Gen.- 07; SC-02; ST- 01;
2	Department Of Community Education & Disability Studies	Community Education & Development	Gen.- 06; SC - 01; ST-01

Faculty of Laws

<u>Sr. No.</u>	<u>Name of the Department / College</u>	<u>Subject</u>	<u>No. of slots for Ph.D. (subject to change)</u>
1	Department of Laws	Law	19
			Gen. 13; SC 3; ST 1; BC 1; PwD 1

In case of enrolment of & Ph.D. in the following subjects/ Departments / Chairs, Subject (s) of Test will be as indicated:-

- | | | |
|-------|---|---|
| (i) | Interdisciplinary Centre for Swami Vivekanand Studies | } Masters degree in any Faculty with 55% marks in aggregate |
| (ii) | Department of Guru Nanak Sikh Studies | |
| (iii) | Guru Ravi Dass Chair of Sant Sahitya Studies | |

IMPORTANT NOTE:

The seats available will be subject to reservation as per Panjab University Rules and Regulations.

PROCEDURE FOR ADMISSION TO Ph.D. PROGRAMME

For admission to these courses the candidates have to qualify Ph.D. entrance test conducted by the Panjab University, Chandigarh. Procedure for admission to Ph.D. Programme will be followed as per the Guidelines approved by the Panjab University and circulated vide letter No. ST.4313-4512 dated 01-06-2023.

ELIGIBILITY CRITERIA FOR ADMISSION TO Ph.D. PROGRAMME

1. Candidates who have completed:
 - (i) A 1-year / 2-Semester master's degree programme after a 4 year/ 8 semester bachelor's degree programme or a 2 year / 4 year semester master's degree programme after a 3 year bachelor's degree programme or qualifications declared equivalent to the master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed
OR equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognised or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of the educational institution,
 - (ii) A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer) / Differently-Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time.
 - (iii) Provided that a candidate seeking admission after a 4 year / 8 semester bachelor's degree programme should have a minimum of 75% marks in aggregate or its equivalent grade on a point scale wherever the grading system is followed. A relaxation of 5% marks or its equivalent grade may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/ Differently- Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the Commission from time to time.
2. Candidates who have completed the M.Phil. programme with at least 55% marks in aggregate or its equivalent grade in a point scale wherever grading system is followed or equivalent qualification from a foreign educational institution accredited by an assessment and accreditation agency which is approved, recognised or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assure quality and standards of educational institutions, shall be eligible for admission to the Ph.D. programme. A relaxation of 5% marks or its equivalent grade may be allowed to those belonging to SC/ST/OBC (non-creamy layer) / Differently- Abled, Economically Weaker Section (EWS) and other categories of candidates as per the decision of the University Grant Commission from time to time,

ELIGIBILITY FOR TEST IN FACULTY OF PHARMACEUTICAL SCIENCES

1. (a) Bachelor degree of Pharmacy.
(b) Master's degree of Pharmacy in Pharmaceutical Chemistry / Pharmaceutics/ Pharmacognosy / Pharmacology / Pharmaceutical analysis / Pharmaceutical Quality Assurance/ Pharmaceutical Analysis & Quality Assurance / Drug Discovery and Drug Development

OR

Master's degree (M.Pharm., M.Sc., M.S., M.Tech. program) related to subjects listed under 1-b viz. Master's degree in Industrial Pharmacy / Pharmaceutical Technology / Regulatory Affairs/ Pharmaceutical biotechnology /Pharmacy Practice / Phytopharmacy & Phytomedicine / Medicinal Chemistry / Pharmacoinformatics / Natural Products / Traditional medicine / clinical research / Technology (Formulations) / Pharmacology & Toxicology / Pharm. Technology (Process Chemistry) / Regulatory Toxicology / Pharm. Technology (Biotechnology) etc. related to subjects listed under 1-b above with equivalence of course content. The equivalence shall be examined and decided by the Academic Committee of the UIPS.

ELIGIBILITY FOR TEST OF FACULTY OF ENGINEERING

Master's degree in Engineering or Technology in the subjects of Computer Science & Engineering / Electronics & Communication / Electrical & Electronics / Information Technology / Mechanical / Biotechnology/ Materials / Microelectronics or an Allied subject approved by AICTE. For Ph.D. in the Subjects related to applied Science, Master's degree in Science in (Physics/ Chemistry / Mathematics) or Allied subjects (The candidates will be enrolled in Faculty of Science).

Any candidate who has passed the Master's examination in the concerned subject with a score of not less than 55% (50% for SC/ST/BC/PwD Category) marks in aggregate or have appeared in the final year examination of Master's degree in the subject concerned from Panjab University, Chandigarh or from any other University (approved by the appropriate Academic Bodies of P.U.) shall be eligible to appear for the Ph.D. Entrance Test.

For Chemical/ Food Technology / Industrial Chemistry

Any candidate who has passed the Master's examination in the concerned subject with a score of not less than 55% (50% for SC/ST/BC/PwD Category) marks in aggregate, or have appeared in the final year examination of Master's degree in the subject concerned from Panjab University, Chandigarh or from any other University (approved by the appropriate Academic Bodies of P.U.), shall be eligible to appear for the Ph.D. Entrance Test.

ELIGIBILITY FOR TEST OF FACULTY OF BUSINESS MANAGEMENT & COMMERCE

Any candidate who has obtained Master's degree with not less than 55% (50% for SC/ST/BC/PwD Category) marks in the aggregate, from Panjab University or from any other University (approved by the Academic Council) in any one of the following subjects: -

- (i) Commerce or Management
- OR
- (ii) Economics, Mathematics, Statistics, Sociology, Psychology, Public Administration, Operations Research, Social Work, Engineering and Laws.
- OR
- (iii) Any subject other than those mentioned in (i) and (ii) above provided that the candidate has either not less than 5 years' work experience at the managerial (including administrative service) level or is a member of the Faculty in the Department of University Business School, Panjab University with not less than 5 years' experience of teaching postgraduate classes.
- OR
- (iv) Master of Finance and Control (MFC)

Provided further that candidates with qualification, mentioned in (ii) & (iii) above shall be eligible for enrolment only if the area of research relates to the Faculty of Business Management and Commerce.

- (v) The following categories of candidates, who are graduates and have either a minimum 5 years' standing in the profession (practice or service) or 5 years' experience of teaching postgraduate classes, shall also be eligible:
 - (a) A member (Associate or Fellow) of the Institute of Chartered Accountants of India.
 - (b) A member (Associate or Fellow) of the Institute of the Cost & Works Accountants of India.
 - (c) A member (Associate or Fellow) of the Institute of Company Secretaries of India.

University Business School / University Institute of Applied Management Sciences/ University Institute of Hotel and Tourism Management will admit students to Ph.D. programme once in a year only, i.e. in the beginning of the session of Ph.D. Programme, as University Business School / University Institute of Applied Management Sciences / University Institute of Hotel and Tourism Management has two-semester course-work.

EXEMPTION FROM ENTRANCE TEST FOR ENROLMENT To Ph.D. AS PER THE CIRCULAR NO. ST. 4313-4512 DATED 01-06-2023

Panjab University shall admit Ph.D. scholars through Entrance Test conducted at the level of the University.

- i. However, exemption from entrance test will be given to those who have already cleared any of the National Test for the eligibility of lectureship like UGC/ CSIR NET including JRF, GATE, CEED, GPAT, ICMR, ICAR, or any other prestigious test for National level scholarship / fellowship conducted by Govt. of India.
- ii. Direct awardees of National / International fellowship for pursuing Ph.D. and working regular teachers of Panjab University are exempted from the entrance test.
- iii. The GATE/ GPAT or any other national level test meant for admission to Ph.d. be considered as per validity of score card.
- iv. Ph.D. Entrance Test of Panjab University for admission to Ph.D. shall be valid for 3 years.**
- v. The Entrance Test syllabus shall consist of 50% of research methodology and 50% shall be subject specific.
- vi. Students who have secured 50% marks in the entrance test are eligible to be called for the interview.
- vii. A relaxation of 5% marks will be allowed in the entrance examination for the candidates belonging to SC/ST/OBC/differently-abled category, Economically Weaker Section (EWS), and other categories of candidates as per the decision of the UGC from time to time.
- viii. Panjab University may decided the number of eligible students to be called for an interview based on the number of Ph.D. seats available in the respective departments/ approved research centres.
- ix. Provided that for the selection of candidates a weightage of 70% for the Academic Performance Index and 30% for the performance in the interview / viva-voce shall be given.
- x. With regard to admission in Ph.D. for foreign students, the following guidelines shall be followed:-**
 - (a) International/ Foreign students who are being sponsored by the government body such as the ICCR or MHRD or a government agency of their own country, will be given direct admission to Ph.D. subject to the approval of the concerned department or centre.

- (b) International / Foreign students who have been studying in India and are present in India at the time of the Ph.D. CET will have to sit for the test and clear it in order to be considered for enrolment.
- (c) The International / Foreign students who are not present in India at the time of the Panjab University Ph.D. CET will need to achieve at least band 5 in IELTS Academic or 60 in TOEFL or 150-154 in GRE or 600 in GMAT. At the time of filling the enrolment form the candidate must attach the score in any one of the above tests. However, all such candidates will have to qualify in the interview.

SCHEME OF TEST

The medium of examination shall be ENGLISH only, except in the test for language other than English.

Test for Public Administration, Sociology, Social Work, Police Administration and Music will be conducted in the medium of English, Hindi and Punjabi.

The Test shall consist of 2 papers in each subject as detailed below: -

Paper-I (Objective Type / Multiple Choice Questions)

Duration:	One Hour	Maximum Marks:	50
Number of questions:	50	Questions to be attempted:	50

Each question will carry one mark. **There will be no negative marking.**

IMPORTANT NOTE: There will be 25 questions on Research Methodology in Part A and 25 MCQs on Subject specialization in Part B).

Paper-II (Subjective / Descriptive Type)

Duration:	Two Hours	Maximum Marks:	50
Number of questions:	08	Questions to be attempted:	05

Each question will carry ten marks.

IMPORTANT NOTE: (There will be FOUR questions on **Research Methodology in Part A** and FOUR questions on **Subject Specialization in Part B** in **Paper II**. Out of that the candidate is expected to attempt FIVE questions atleast two questions from each Part in Paper II).

Use of calculator for Paper-II is allowed. However, use of programmable calculator is not allowed.

RESULT

Initial evaluation will be of Paper-I (Objective Type). Only if a candidate obtains 40% (35% for SC/ST/BC/PwD) marks or more only then his/ her paper II will be evaluated.

However, the total qualifying marks for Paper I and II would be 50%. (Syndicate Para 2 dated 08-03-2020).

Result of Ph.D. entrance test will be available on Panjab University website results.puchd.ac.in

INTERVIEW

Panjab University shall conduct entrance examination as a qualifying examination for admission to Ph.D. once a year (with exemption of test to categories mentioned in Page No. 12 & 13 of the Prospectus). However, to facilitate admission of candidates before the expiry of the validity of entrance examination / JRF offer letter, the application for admission to Ph.D. shall be accepted throughout the year. All accepted applications shall be processed for admission in three cycles in a year (i.e. in the months of January, May and September). However, in case of research fellows employed under any state/ central/ international research projects, their applications for admission to Ph.D. shall be processed throughout the year provided they fulfill eligibility guidelines. In each admission cycle a fresh merit list shall be prepared.

FELLOWSHIP: A few University fellowships are available for Ph.D. research. If successful candidates wish to be considered for the University fellowship they should report to their respective departments.

RESERVATION PROCEDURE

- i. Adhere to the National / State-level reservation policy, as applicable taking cumulative number of seats in each admission cycle during over a period of one year.
- ii. The reservation of seats of SC/ST/BC/PWD candidates will be department-wise and L-shaped roster would be followed, i.e., if the number of seats in a given admission cycle is less than 7, then the reservation will be given in the next admission cycle when the 7th seat (counting seats of both the admission cycles) becomes available. Similarly, if cumulative number of seats in first two cycles is less than 7, then the reservation will be given in third cycle when 7th seat (counting seats of all three admission cycles) becomes available. At the end of year (i.e. all three cycles), if number of seats is less than 7, then the reservation will be given in the next year when the 7th seat (counting seats of last three and 1st cycle of the current years) becomes available.
- iii. The specialisation within the subject for giving reservation will be decided by the department. Reservation policy is to be followed for Ph.D. scholars working as Project Fellows in various projects also. Every Project In-charge / Principal Investigator would be enjoined upon to ensure that nth project fellow recruited under him / her is from the reserved category enlisted for reservation at the nth position, e.g. every 7th project fellow is for SC category and so on.

IMPORTANT NOTE: ANY MODIFICATION REGARDING PH.D. -2024 ENTRANCE TEST WILL BE UPLOADED ON THE WEBSITE [HTTPS://PHDADMISIONS.PUCHD.AC.IN](https://phdadmissions.puchd.ac.in) LATER ON.

GENERAL RULES

1. Qualifying the Entrance Test shall not, ipso facto, entitle a candidate to get enrolment in the Department concerned where he / she intends to seek enrolment. This will be followed by mandatory interview. The selection would be solely based on the performance of the candidates in the interview. It will be the responsibility of the candidate to ensure his/her eligibility and fulfillment of such other conditions as may be prescribed for enrolment in the Rules and Regulations of the University. The enrolment will be subject to the availability of seats and Experts for Guidance / Supervision in the Area of Research to be chosen by the candidate and the candidate is required to verify these facts from the concerned Department before applying for the Test.
2. The Entrance Test will be held on **25-08-2024 (Sunday)** at **Chandigarh** only.
3. Once the candidate has submitted the information on the website, any change in the Form/information, including category once marked, shall not be allowed.
4. A candidate desirous of taking the Entrance Test should submit his/her fee through Online mode by **11-08-2024 (Sunday)**.
5. Last date for completing the Entrance Form including uploading of photograph, signature, with rest of the information on the website is **13-08-2024 (Tuesday)**.
6. The fee for the Entrance Test once paid shall not be refunded / transferred / adjusted.
7. The candidates shall be required to hand over their Answer-Sheets and the Question Papers / Booklets in full to the Centre Superintendent even if they have not attempted any question. No page/part of the Question Paper/Answer Sheet is to be removed / torn/taken out of the Examination Centre under any circumstances, failing which the candidates shall be disqualified from the entire test.
8. The use of calculator is not allowed in any subject/paper, except in Paper-II of Faculty of Engineering. But it should not be Programmable Calculator.
9. The University will provide the logarithmic table. Borrowing of log table or other material from any other person/ candidate is not allowed.
10. **No candidate shall be allowed to leave the examination hall/room before the expiry of the time allowed for the respective examination.**
11. For rough work, only the Sheets marked 'Rough Work' at the end of the question booklet/script should be used. No rough work should be done on the Answer Sheet under any circumstances.
12. Any candidate who carries any telecommunication equipment such as pager, cellular phone, wireless set, Bluetooth device, etc. inside the examination hall shall be expelled from the examination hall & disqualified.
13. If any candidate who submits multiple Online Entrance Test Forms for the same Course his/her candidature shall be considered only on the basis of one Form.
14. The candidates must bring their own stationary items such as **Black Gel Pen. Borrowing of material inside the Test Centre is strictly prohibited.**
15. **There shall be no negative marking.**
16. **There shall be no re-evaluation/re-checking/re-assessment of Answer-Sheets.** Request for seeing the Question Booklet/Evaluated Answer Sheets/Answer-Books by the candidates

shall not be entertained. The evaluation once done by the University shall be taken as absolutely final.

17. If a candidate wishes to verify her/his result, s/he will be provided a photocopy of her/his Answer Sheet (OMR Answer sheet only) on payment of Rs.10,000/- **within 10 days after the declaration of the Entrance Test result.** The University office would complete the whole procedure of verification within three working days. In case, a discrepancy is found in the result of the candidate, it would accordingly be revised and the verification fee will be refunded.
18. The candidates shall be required to Answer the questions only on the Answer-Sheets provided for that purpose, as per the rules/ norms stated in the respective Answer Sheets.
19. Candidates are not allowed to carry eatables, drinks etc. into the Test Centre. Smoking inside and around the Centre is not permitted.
20. Any candidate who creates disturbance of any kind during examination or otherwise misbehaves in or around the examination hall or refuses to obey the Superintendent/Deputy Superintendent/Assistant Superintendent/any other official on examination duty or changes his/her seat with any other candidate or occupies any seat, other than the one allotted to him/her shall be expelled from the examination hall.
("Expulsion" for this purpose would mean cancellation of candidature)
21. Any candidate having in his possession or accessible to him/her papers/books or notes which may possibly be of any assistance to him /her or is found giving or receiving assistance, or copying from any paper/book or note or from anywhere else or allowing any other candidate to copy from his/her Answer book or found writing on any other paper question set in the question paper during examination, or using or attempting to use any other unfair means, or indulging in any kind of misconduct, shall be expelled from the examination hall.
("Expulsion" for this purpose would mean cancellation of candidature)
22. If any Answer Sheet of a candidate shows or if it is otherwise established that he/she has received or attempted to receive help from any source in any manner or has given help or attempted to give help to any other candidate in any manner, the relevant Answer-Sheets shall be cancelled. The decision of the Controller of Examinations, Panjab University, Chandigarh, in this regard shall be final.
23. **If a candidate writes his/her name or puts any kind of identification mark or discloses his/her identity by any method whatsoever on the cover or anywhere else in the Question Booklet/Answer Sheets, the same shall be treated as cancelled. The decision of the Controller of Examinations, Panjab University, Chandigarh, in this regard shall be final.**
24. Any person who impersonates a candidate, shall be disqualified from appearing in any Panjab University examination for a period of **five years** including this Entrance Test, if that person is a student on the rolls of a recognized College or University, he/she shall be declared as a person not fit and proper to be admitted to any examination of the Panjab University for a period of **five years**. The case, if necessary, shall also be reported to the police for any further action in the matter.
25. If it is found that a candidate has knowingly or willfully concealed or suppressed any information/fact which renders him/her ineligible to take the Entrance Test, his/her result of the Test as also admission/enrolment to a Institution/Department/Centre of the University, if granted, shall stand cancelled and he/she shall have no claim whatsoever against the Institution/ Department/ Centre concerned and the case, if necessary shall be reported to the police.

26. If a dispute or controversy of any kind arises before, during or after conduct of the Entrance Test, the decision of the Controller of Examinations, Panjab University, in all such cases, shall be final.
27. **The candidates shall be admitted to the Test only on the production of the Admit Card at the Test Centre. No candidate shall be allowed to take the test without the Admit Card under any circumstances. The candidates must retain the Admit Card with them till the enrolment process is over and must produce the same at the time of enrolment.**
28. The Admit Cards will be issued to the candidates only provisionally, at their sole risk and responsibility subject to the final confirmation of their eligibility at the time of admission / enrolment. It is further clarified that the candidates shall be taking the test at their own risk and responsibility as far as their eligibility is concerned and the University shall, in no way, be responsible if they are found to be ineligible, later, leading to cancellation of their result or any other consequence(s) emanating from the same.
29. The final date by which Roll No. will be available online is **20-08-2024 (Tuesday)**. Admit Card required to be downloaded from the website by the candidate using their own Login and Password. **There will be no physical communication for this purpose.**
30. On 16-09-2024, the Question Papers and Answer Keys will be put on the University website <http://exams.puchd.ac.in/show-noticeboard.php> . The candidates can file their objections regarding discrepancies and accuracy of the Key by e-mail to arcet@pu.ac.in latest by 18-09-2024. Objections received will be published on the website and cross objections will also be invited within a certain timeframe as mentioned in the Schedule for Entrance Test at Page 4. The valid concerns thus expressed will be given due consideration while evaluation.
31. The following functionaries may be contacted for extremely urgent enquiry, if any, only on working hours i.e. from Monday to Friday (from 10:00 a.m. to 4:00 p.m.).

1. Assistant Registrar (C.E.T.)	0172 – 2534829
2. Superintendent (C.E.T.)	0172-2534829, 9814666346
3. Dealing official (C.E.T.)	9872812339
3. Controller of Examinations	0172 – 2534811
4. Main Enquiry Office	0172 – 2534818, 2534819, 2534866, 18001802065

ANNEXURE I

FACULTY OF BUSINESS MANAGEMENT & COMMERCE

SYLLABUS FOR PH.D. EXAMINATION (2024)

Paper I: Research Methodology Compulsory and Common for all 50 marks

Basic Concepts of Research Methodology, Research Process, Review of Literature, Theory Building, Hypothesis Formulation, Research Design, Sampling, Data Collection Methods, Data Collection Instruments, Hypothesis Testing – Univariate, Bivariate & Multivariate Techniques, Data Processing, Report Writing.

A : SYLLABUS FOR PH.D. PROGRAMMES AT

- (1) UBS
- (2) DES
- (3) CDOE
- (4) PURC, Ludhiana
- (5) GGSDS, Chandigarh

Paper II: Students shall select one of the following groups 50 marks

GROUP – I

ACCOUNTING AND FINANCE / BANKING & INSURANCE

Management, Accounting, Financial Management, Financial Statement Analysis, Financial Engineering, Management of Financial Services, Investment Management, Management Control Systems, Project Planning, Analysis and Management, Strategic Cost Management, International Financial Management, Behavioural Finance, Corporate Governance, Business Finance, International Accounting, Banking, Insurance.

GROUP – II

HUMAN RESOURCES

Human Resource Management, Economics for Human Resources, Organisational Behavior, Labor Legislation, Industrial Relations, Management of Change, Human Resource Planning, Strategic Human Resource Management, Performance and Compensation Management, Organisational Development, Training and Development, Negotiating Skills, Participative Decision Making, Social Security, Labour Welfare, Human Resource Information Systems, Personal Effectiveness and Leadership, Management of Discipline and Disciplinary Proceedings, Ethics and Conduct of Business, Interpersonal Skills and Transactional Analysis, Human Resource Valuation, Total Quality Management, Stress Management, Designing Organisations for Uncertain Environments, Dynamics of Trade Unions, Emotional Intelligence and Managerial Effectiveness, Comparative Industrial Relations, Managerial Competencies and Career Development, Building Learning Organisations, Industrial Engineering, Secretarial practice.

GROUP – III

MARKETING / RETAIL MANAGEMENT

Fundamentals of Marketing Management, Advertising, Brand Management, Consumer Behaviour, Customer Relationship Management, Global Marketing, Industrial Marketing, Internet Marketing, Marketing Research, Marketing Strategy, Product Management, Retail Management, Rural Marketing, Sales Management, Supply Chain Management and Services Marketing,

GROUP – IV

STRATEGIC MANAGEMENT / INFRASTRUCTURE MANAGEMENT

Fundamentals of Micro Economic and Macro Economics; Forces in the External Environment economic and non-economic; Forces in the Internal Environment; Formulation and Implementation of Corporate Level Strategy, Global Strategy, Business Level Strategy, and various Functional Level Strategies- including Marketing Strategy, Human Resources Strategy, Operation Strategy and Financial Strategy; Entrepreneurship and Strategies for Entrepreneurial Ventures, Infrastructure Management.

GROUP – V (i)

INFORMATION SYSTEMS

Role of IS in Business, Globalisation Challenges and Opportunities, E-Business, IT role in Business enhancement, TPS, E-Commerce, E-Governance, IS Organisations and Strategic, Ethical & Social issues in IS, Cyber bullying, Managerial Decision. Making and Information System, Enterprise Resource Planning, IT Evolution and its Implications for Business, IT Infrastructure components, Contemporary Hardware trends, Contemporary Software trends, Business Intelligence-Databases and Information Management, Database approach to data management, Multidimensional data analysis, data mining, database and web, Telecommunications, Internet & Wireless Technology, Communications Networks, Internet, Wireless networks in Business, Malicious Software Technologies and tools for protecting Information system, HR issues in IT Industry.

GROUP – V (ii)

BUSINESS ECONOMICS

Theory of demand, techniques for demand forecasting, Theory of consumer behavior, Production function, Modern theory of cost and its application, profit theories, Factor pricing theory, Classical and Keynesian approaches to theory of income, Theories of Consumption, Aggregate Demand and Aggregate Supply Analysis; Demand for money and determinants of money supply, Inflation and unemployment, Monetary and Fiscal policies, Modern theory of trade and trade Policy, Free Trade versus Protection, Theories of balance of payment and exchange rate determination. Role of industrialization in economic development, Industrial growth in India during plans, India's industrial policies, Role and performance of public sector enterprises, performance and problems of micro, small, medium enterprises in India. International economic environment, Globalisation and its impact, Multinational Corporations, Foreign investment.

GROUP – V (iii)

OPERATIONS

Operations research: Linear and non-linear Optimization, Transportation and Assignment problems, Simulation theory and methods, Convexity, Decision theory analysis, Theory of games, Production and service systems, Logistics systems, Queuing theory, Product and service design, Product Quality TQM, Facility location and layout, Capacity and equipment selection, Operations scheduling, Supply chain management, Enterprise resource management, JIT production systems, Material management and Inventory management, Sequencing problems, PERT/ CPM – probability considerations in PERT, Replacement models.

**B: SYLLABUS FOR PH.D. PROGRAMMES AT
UNIVERSITY INSTITUTE OF APPLIED MANAGEMENT SCIENCES (UIAMS)**

PAPER – II (GENERAL PAPER)

Indian Financial System and its structure, Indian Banking System, Nationalization of banks, Financial sector reforms and their impact; Introduction to Retail Banking, Wholesale banking, Investment banking, International banking; Regulatory framework of banks in India.

Introduction to Retailing, Basic Retail Concepts, Strategic Retail Planning Process; Understanding the Retail Customer; Delivery value through retail formats; role of Customer services and Relationship Marketing in Retail, Retail location & Site decision Evaluating Areas for location.

Emerging Trends in Infrastructure Development: Sustainable Societies: Meaning & Definition, Smart Cities: Meaning & Definition, Objectives, Smart Solutions, Features of Smart Cities: Sustainable and environment-friendly public transport solutions, Public Private Partnership: Definition, The Rationale for Public Private Partnerships, PPP vs. Privatization, Public Private Partnerships: an Indian Perspective.

Information Systems: Role of IS in Business. Globalisation Challenges and Opportunities, E-Business: IT role in Business enhancement, TPS, E-Commerce, E-Government, IS Organisations and Strategy, Ethical & Social issues in IS, Cyber bullying.

Global and Indian healthcare Industry, Opportunities and challenges for the healthcare industry, contemporary issues in healthcare industry, healthcare delivery system in India, Environmental and community health.

**C: SYLLABUS FOR PH.D. PROGRAMMES AT
UNIVERSITY INSTITUTE OF HOTEL AND TOURISM MANAGEMENT**

Paper- II. a: HOTEL MANAGEMENT

UNIT – I

ROOMS DIVISION MANAGEMENT

- **Hospitality-** Introduction, concept, development over the ages in context of Indian and International Hospitality Industry.
- **The Hotel Industry:** Organization of Hotels, Ownership structure: (Sole Proprietorship, Partnership, Franchisees and Management Contract). Major Hotel Chains in India. Overview of major Hotel departments. Inter and Intra departmental relationships.
- **Introduction to Front Office:** Layout of the front office, Different section of the front office and their Importance, Qualities of Front Office staff. Organizational set-up of Front Office Department in small, medium and large hotels. Job description and Job specification of different front office personnel. Basic Information for Front Desk Agents Different types of rooms. Numbering of rooms and food plan, Basis of charging a guest. Tariff and tariff fixation, Terms used at Front Desk.
- **Reservation:** Sources & Modes of Reservation, Types of Reservation, Systems of Reservation, Amendments and cancellations procedures, Group reservation, overbooking. Modes of Payments- Advantages and Disadvantages
- **Registration:** Pre-registration activities, Methods of registration, Room & rates assignment, Handling registration of Foreigners, Room change procedure. Telephonic etiquettes/ manners, the need for developing the telephone skills
- **Guest Accounting:** Types of Accounts maintained at the front office, Front office cashiering Guest check out procedures, Preparation of bills- manual, mechanical & fully automated system, Express check out (ECO), Presentation & settlement – Cash & credit note, handling foreign exchange.
- **Night Auditing, Control of cash & credit:** Concept of Night Auditing, Purpose of night audit function, Night auditor's Job, Night audit process/ procedures, preparing the night auditor reports. Concept of cash & credit control, Objectives of credit control measures, Credit control- before arrival, during stay & after departure
- **Yield management:** Concept of yield management, Measuring yield, Objectives & benefits of yield management, Tools & strategies of yield management.
- **Role of Front office in hotel security:** Security Programme- Concept, developing a programme. Key control. Handling emergency situations.
- **Accommodation Sector in India:** Hotel Classification, Types, Indian & Foreign Origin Hotel Chains in India, HRD perspective with special reference to India – Requirements, Training facilities, Constraints and scope, Hotel.
- **Introduction:** Meaning and definition. Importance of Housekeeping; Housekeeping Department: Organizational framework of the Department (Large/Medium/Small Hotel), Roles of Key Personnel in Housekeeping, Job Description and Job Specification of staff in the department, Attributes and Qualities of the Housekeeping staff - skills of a good Housekeeper, Inter departmental Coordination with more emphasis on Front office and the Maintenance department.
- **Cleaning Science:** Types of cleaning equipments, selection, general principles; Types of cleaning- daily, weekly spring and deep cleaning, Housekeeping control desk-importance, role; Types of registers and files maintained; Types of Keys and Keys control; Lost of Found procedure and formats
- **Cleaning of Public Areas:** Cleaning process, Cleaning and upkeep of Public areas, (Lobby, Cloak rooms/ Restaurant/bar/banquet halls/Administration offices/Lifts and Elevators/Staircase/back areas/Front areas/ Corridor), Pest Control: Types of pests, Control procedures.
- **Cleaning of Guest Rooms:** Daily cleaning of (Occupied/Departure vacant Under repair VIP rooms, Weekly cleaning/spring cleaning, Evening service, Systems & procedures involved, Forms and Formats, Guest room cleaning - Replenishment of Guest supplies and amenities. Housekeeping Supervision: Importance of inspection, Check-list for inspection,

typical areas usually neglected where special attention is required, Degree of discretion/delegation to cleaning staff.

- **Linen/Uniform Tailor Room:** Layout, Types of Linen, sizes and Linen exchange procedure, Selection of linen, Storage Facilities and conditions, Par stock: Factors affecting par stock, calculation of par stock, Discard Management, Linen Inventory system, Uniform designing: Importance, types, characteristics, selection, par stock
- **Interior Decoration-:** Importance, Definition & Types, Classification, Principles of Design: Harmony, Rhythm, Balance, Proportion, Emphasis, Elements of Design: Line, Form, Colors, Texture. Colors: Color Wheel, Importance & Characteristics, Classification of colors, Color Schemes. Lighting: Classification, Types & Importance
- **Laundry Management:** In-house Laundry vis contract Laundry: merits & demerits, Layout, Laundry Flow process, Equipment (Washing machine, Hydro extractor, Tumbler, Calendar/Flat work Iron, Hot head/Steam press, Cooler press, Pressing tables), Stains and Stain removal

UNIT – II

FOOD AND BEVERAGE SERVICE AND PRODUCTION DIVISION

- **Introduction to Food and Beverage Service:** Introduction, Sections and their Importance. Types of F&B outlets. Ancillary departments. Qualities of F&B staff. Organizational set-up of F&B Service department in small, medium and large hotels. Job description and Job specification of different front office personnel. Career opportunities in F&B Industry. Latest trends in F&B Service Industry.
- **Food & Beverage Service Equipment:** Types & Usage of Equipment - Furniture, Chinaware, Silverware. Glassware, Linen & Disposables, Special Equipment. Role of Kitchen stewarding department. Care and maintenance of F&B service equipments.
- **F&B Service Methods** Table Service –English / Silver, American, French, Russian Self Service – Buffet & Cafeteria. Specialized Service – Gueridon, Tray, Trolley, Lounge, Buffet service and Banquet procedures etc.
- **Single Point Service** – Take Away, Vending Kiosks, Food Courts & Bars, Automats. Mis-en-place & Mis-en-scene.
- **Breakfast:** - Continental, English, American and Indian, Introduction, Types, layout, cover, Accompaniments and services; Latest trends in breakfast
- **Room Service-** Introduction, types, importance, organizational structure & service procedure.
- **Menu: Introduction, types, importance.** Menu Planning, considerations and constraints
- **French Classical menu.** Classical Foods & its Accompaniments with Cover. Rules for waiting at a Table.
- **Non Alcoholic Beverages:** Introduction, Classifications and Types.
- **Tea-** History, types, production process, service and storage. **Coffee-** History, types, production process, service and storage.
- **Alcoholic Beverages:** Introduction, classifications, types- a brief detail. **Beer-** History, types, production process, national and international brands, service and storage.
- **Spirits- History,** types, production process, national and international brands, service and storage
- **Wine:** Introduction, classifications, types, production process. Wine tasting and faults. Wine labelling. Pairing alcohol and food. Knowledge of Wine grapes, and wine regions. International wine brands. Old world wine and New world wine- a brief introduction. Professional wine service and storage.
- **Banquet management:** Introduction, types, organizational structure, layout. Banquet booking procedure. Staff and space required for different kinds of banquet functions. Banquet menu. Banquet forms and formats.
- **Buffet** – introduction, types, equipments and buffet presentation techniques. Current trends in banquet and buffet operations
- **Advance Bar Layout & Design** – Types of Bar, Design of Bar, Major Bar Equipments, Bar Accessories, Consumable Supplies, Glassware – commonly used, Storage & Handling of Glassware
- Cocktails and Mock tails; Emerging trends in bar operations

- **Beverage control:** Introduction, Procedure, techniques and importance of beverage control, Purpose and standards of Beverage control: purchasing, receiving, storing and issuing. BOT. Inventory control. New trends in bar and beverage control operations.
- **Introduction** to cookery and evolution. Aims and objectives of cooking food.
- Qualities of Kitchen staff. Kitchen Staff organization & liaison of kitchen with other departments. Duties and attributes of kitchen staff.
- **Handling kitchen accidents** e.g. burns, cuts, fractures and Heart attack.
- **Fire:** Introduction, Types and how to extinguish different types of fire.
- **Various types of fuels** used in kitchen. Kitchen equipment- types and selection.
- **Basic food nutrients**, their importance and effect of heat on these.
- **Ingredients used in cooking:** Cereals and Grains, Fruits and Vegetables, and Sweeteners, Egg, Milk and Milk Products, Salt and Oil & Fat - Types, Purchasing and Storing considerations.
- **Pre-preparation techniques of ingredients.**
- **Cooking methods-** introduction and types.
- **Stocks, Soups and Sauces** – Introduction, classification, important considerations and recipes.
- **Fish, Poultry, Lamb/Mutton, Beef and Pork-** Introduction, cuts, selection points.
- **Bakery-** Introduction, and importance of baking ingredients.
- **Cake** – Cake making methods, Cake Faults- reason for faults
- **Pastry** – Pastry making methods, Pastry Faults- reason for faults
- **Indian Cuisine:** Introduction, ingredients used, unique features and famous dishes.

UNIT – III MANAGEMENT AND MARKETING

- **MARKETING**
 - **Core concepts in marketing;** Needs, wants, demands, products, markets. Marketing management philosophies - Production, product, selling, marketing and societal perspectives. Economic importance of marketing
 - **Hospitality marketing:** service characteristics of Hospitality & Tourism Business, Unique feature of tourist demand and hospitality/tourism product, marketing mix. Market segmentation and positioning, consumer buying behavior, product life cycle, interactive and relationship marketing
 - **Planning marketing programmes :** Product and product strategies; product line product mix; branding and packaging; pricing; considerations, approaches and strategies. Distribution channels and strategies
- **MANAGEMENT**
 - **Management:** concept, nature, process and function. Management levels managerial skills and roles. The external environment social responsibilities and ethics.
 - **Planning:** nature, purpose, types and process. Management by objectives strategies and policies. Decision making process, tools, and techniques Decision making models.
 - **Organizing:** concept of organizing and organization. Line and staff, Authority and responsibility, span of control, delegation. Decentralization, conflict and coordination organization structure and design management of change innovation and organization development.
 - **Directing:** communication –process, type, barriers, and principles of effective communication. Motivation- Theories and practices, leadership- concept theories and styles.
 - **Controlling:** Process, methods and techniques. Managing international business.

UNIT-IV RESEARCH METHODOLOGY

- **Research:** Meaning; types; trends and challenges with special reference to hotel business. Guiding principles in selection of research problem.
- **Research methodology:** meaning; procedural guidelines; and research design field procedure for data collection and analysis techniques: nature, sources of data techniques of data collection Frequency distribution: meaning; problems and considerations in construction numerical frequency distributions. Measures of central tendency and variation.

Paper II. b: TOURISM MANAGEMENT

UNIT-I TOURISM PRODUCTS AND SERVICES

- Tourist / Visitor/ Traveler/ Excursionist- definition and differentiation.
- Tourism recreation and leisure inter-relationship(s).
- Tourism components, Elements and infrastructure.
- Types and typologies of Tourism.
- Emerging concepts: Eco / rural/farm/ green/ wildness/sustainable/special interest tourism.
- International Tourism Trends in different regions: Growth and development over the years and factors responsible therein.
- Changing market-destination patterns, Traffic flows/ receipt trends.
- Travel motivator and deterrents. Pull and Push forces in tourism.
- Linkages and Channels of distribution in tourism
- Tourism organization/ Institutions: Origin, Organization and functions of WTO, PATA, IATA. ICAO, FHRAI, TAAI, IATO.
- **Natural Tourism resources in India:** Existing use patterns vis-à-vis potential with relation to varied landforms (Mountains, deserts, beaches, coastal areas and Islands), Water bodies and biotic wealth (flora- fauna).
- **Popular tourist destination for:**
 - **Land based** (soft/ hard trekking, ice skiing mountaineering, desert safaris, car rallies, etc).
 - **Water based** (rafting, kayaking, canoeing, surfing, water skiing, scuba/scuba diving) and
 - **Air based** (para-sailing, para-gliding, ballooning hand-gliding and micro-lighting etc.)
- Tourism in National Parks, wildlife sanctuaries and biosphere reserves (case of Dachigham Corbett/ Dudhwa/ Kaziranga/ Kanha Gir/ Ranthambhor/ Mudumalat/ Sunderbans/ Shivpuri/ Manas.
- Fundamentals of Indian culture and society
- Culture- Tourism relationship
- Architectural Heritage of India: Hindu, Buddhist, Jain and Islamic architecture of India
- Major festivals and fairs of India; Dance and Music in India
- Religion / religious observances and important pilgrim destinations

UNIT-II TOURISM PLANNING AND OPERATIONS

- **Travel Agency and Tour Operations Business:** Origin, Growth and development; Definition, Differentiation and linkage; Organization and functions- Travel information counseling, Itinerary preparation, Reservation, Tour costing/ pricing. Marketing of tour packages, Income sources
- **Airplanes Ticketing:** Orientational perspective of ticketing- ABC codes, Flight schedules, flying time and MPM/TPM calculation, TIM (Travel information Manual) consultation, Routine and itinerary preparation, Types of fare, Fare calculation and rounding-up. Currency conservation and payment modes, issuance of ticket.
- Requirements for setting up travel agency and tour operations business, Approval from organization and institutions concerned, Incentives available in Indian context, Constraints and limitations
- **Tourism Planning:** Origin, concept and approaches

- Level and types of tourism planning- Sectoral, Spatial, Integrated, complex, Centralized and Decentralized
- Product life cycle theories and their applicably in tourism planning, Urban and rural tourism planning
- Tourism planning and policy perspectives; planning at national state and regional levels
- India's tourism policies
- Tourism planning process: Objectives setting, Background analysis, Detailed research and analysis, synthesis, Goal setting and Plan formulation, Evaluation of tourism project- Project feasibility study; plan implementation, Development and monitoring. Tourism master plan.
- Tourism impacts and needs for sustainable tourism planning: Socio- cultural, Economics and physical; Tourism carrying capacity and environmental impact analysis (EIA)

UNIT – III MANAGEMENT AND MARKETING

➤ **MARKETING**

- **Core concepts in marketing;** Needs, wants, demands, products, markets. Marketing management philosophies - Production, product, selling, marketing and societal perspectives. Economic importance of marketing
- **Hospitality marketing:** service characteristics of Hospitality & Tourism Business, Unique feature of tourist demand and hospitality/tourism product, marketing mix. Market segmentation and positioning, consumer buying behavior, product life cycle, interactive and relationship marketing
- **Planning marketing programmes :** Product and product strategies; product line product mix; branding and packaging; pricing; considerations, approaches and strategies. Distribution channels and strategies

➤ **MANAGEMENT**

- **Management:** concept, nature, process and function. Management levels managerial skills and roles. The external environment social responsibilities and ethics.
- **Planning:** nature, purpose, types and process. Management by objectives strategies and policies. Decision making process, tools, and techniques Decision making models.
- **Organizing:** concept of organizing and organization. Line and staff, Authority and responsibility, span of control, delegation. Decentralization, conflict and coordination organization structure and design management of change innovation and organization development.
- **Directing:** communication –process, type, barriers, and principles of effective communication. Motivation- Theories and practices, leadership- concept theories and styles.
- **Controlling:** Process, methods and techniques. Managing international business.

UNIT-IV Research Methodology

- **Research:** Meaning; types; trends and challenges with special reference to hotel business. Guiding principles in selection of research problem.
- **Research methodology:** meaning; procedural guidelines; and research design field procedure for data collection and analysis techniques: nature, sources of data techniques of data collection Frequency distribution: meaning; problems and considerations in construction numerical frequency distributions. Measures of central tendency and variation. Correlation and regressions analysis. Probability and probability distributions sampling and statistical testing Parametric and non-parametric testing