

# **Ph.D. Programme in Commerce**

## **Syllabus 2024 – 2025**



**DEPARTMENT OF COMMERCE  
FACULTY OF ARTS, SCIENCE, COMMERCE AND MANAGEMENT**

**KARPAGAM ACADEMY OF HIGHER EDUCATION**

(Deemed to be University)

(Established Under Section 3 of UGC Act, 1956)

(Accredited with A+ Grade by NAAC in the Second Cycle)

Pollachi Main Road, Eachanari (Post), Coimbatore – 641 021, Tamil Nadu, India

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**Regulations**  
for  
**Ph.D., Full Time (FT) / Part Time (PT)**

As per the UGC (Minimum Standards and Procedures for Award of Ph.D., Degree)  
Regulations, 2022

The Regulation will be effective from 7<sup>th</sup> November, 2022  
(The research scholars admitted from January, 2023 onwards will be governed by this regulation)



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## Regulations for Ph.D., Full Time (FT) / Part Time (PT)

### 1.0 Preamble

The Degree of Doctor of Philosophy (Ph.D.,) is awarded to a candidate who has submitted a thesis on the basis of original and independent research work done in any particular discipline or involving more than one discipline (inter-disciplinary), that make a contribution to the advancement of knowledge, which is approved by Board of Examiners as per the requirement.

### 2.0 Eligibility Criteria for admission to the Ph.D., Programme:

- 2.1 A 1-year/2-semester master's degree programme after a 4-year/8-semester bachelor's degree programme or a 2-year/4-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, recognized 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.

- 2.2 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.

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, recognized 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 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

- 2.3 The Part Time research scholars have to report to the guide once in a month till they submit their Synopsis/Thesis.

### **3.0 Admission**

Admission for Ph.D. programme shall be made on half yearly basis viz. January and July. The admission shall be based on the criteria notified by the Institution, keeping in view the guidelines/norms issued by the UGC and other statutory bodies concerned and taking into account the reservation policy of the Central / State Government and the number of vacancies available with each recognized guide of the Department concerned.

### **4.0 Selection Procedure**

4.1 The candidates will be selected for admission to Ph.D., programme based on the performance in the **Entrance Test** and **Interview** conducted to assess the aptitude of the candidate for research, subject to satisfying the eligibility conditions.

The candidates who have qualify for fellowship/scholarship in UGC-NET//UGC-CSIRNET/GATE/CEED and similar National level tests based on an interview. And/or The candidates who have qualified from “Karpagam Academy of Higher Education entrance test” conducted at the level of our Institution. The Entrance Test syllabus shall consist of 50% of research methodology, and 50% shall be subject-specific.

Students who have secured 50% marks in the entrance test are eligible to be called for the interview. 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 Commission from time to time.

KAHE may decide the number of eligible students to be called for an interview based on the number of Ph.D. seats available.

4.2 The candidates selected for admission to the Ph.D., programme shall be required to submit attested copy of the certificates with 3 passport size recent Photo. The original certificates brought during interview will be returned immediately after verification.

4.3 Provided that for selection of candidates, a weightage of 70% to the entrance test and 30% to the performance in the interview shall be given.

4.4 The Karpagam Academy of Higher Education shall maintain the list of all the Ph.D., registered students on its website year-wise. The list shall include the name of the registered candidate, topic of his/her research, name of his/her supervisor / co-supervisor and date of enrolment /registration.

4.5 Admission of International students in Ph.D., programme is also based on Entrance test and Interview keeping in view the guidelines/norms in this regard issued by statutory/regulatory bodies concerned from time to time.

### **5.0 Eligible Degrees for Ph.D., Registration:**

Master's degree / M.Phil., Degree in the relevant disciplines or 4-Year Bachelor's Degree in the relevant disciplines, approved by Central and State approval authority.

## **6.0 Duration of the Programme**

Ph.D. Programme shall be for a minimum duration of three (3) years, including coursework, and a maximum duration of six (6) years from the date of admission to the Ph.D. programme.

A maximum of an additional two (2) years can be given through a process of re-registration as per the Statute/Ordinance of the Higher Educational Institution concerned; provided, however, that the total period for completion of a Ph.D. programme should not exceed eight (8) years from the date of admission in the Ph.D. programme.

Provided further that, female Ph.D. scholars and Persons with Disabilities (having more than 40% disability) may be allowed an additional relaxation of two (2) years; however, the total period for completion of a Ph.D. programme in such cases should not exceed ten (10) years from the date of admission in the Ph.D. programme.

Female Ph.D. Scholars may be provided Maternity Leave/Child Care Leave for up to 240 days in the entire duration of the Ph.D. programme.

Ph.D. programmes through part-time mode will be permitted, provided all the conditions stipulated in these Regulations are fulfilled.

The Higher Educational Institution concerned shall obtain a “No Objection Certificate” through the candidate for a part-time Ph.D. programme from the appropriate authority in the organization where the candidate is employed, clearly stating that:

- i. The candidate is permitted to pursue studies on a part-time basis.
- ii. His/her official duties permit him/her to devote sufficient time for research.
- iii. If required, he/she will be relieved from the duty to complete the course work.

## **7.0 Conversion from Full Time Ph.D. to Part Time Ph.D. and Vice-versa**

- i. Conversion from Full time to Part time or vice versa is permitted on recommendation of the Research Supervisor
- ii. A conversion fee of ₹2000 has to be paid towards the conversion.

## **8.0 Modification of Topic**

Modification of topic of research by the candidate is permitted. A fee of ₹ 2000 has to be paid for a change of topic of research. The time limit fixed for modification of topic of research in Ph.D., programme is up to final DCM prior to submission of synopsis.

## **9.0 Language**

The Ph.D., Part I course work and Part II synopsis / thesis must be written in English for subjects other than languages.

## **10.0 Eligibility criteria to be a Research Supervisor:**

Permanent faculty members working as Professor/Associate Professor with a Ph.D., and at least five research publications in peer-reviewed or refereed journals and permanent faculty members working as Assistant Professors with a Ph.D., and at least three research publications in peer-reviewed or refereed journals may be recognized as a Research Supervisor in the university where the faculty member is employed. Such recognized

research supervisors cannot supervise research scholars in other institutions, where they can only act as co-supervisors. Ph.D. awarded by a university under the supervision of a faculty member who is not an employee of the university would be in violation of these Regulations.

For Ph.D. scholars working in Central government/ State government research institutions whose degrees are given by Higher Educational Institutions, the scientists in such research institutions who are equivalent to Professor/Associate Professor/Assistant Professor can be recognized as supervisors if they fulfill the above requirements.

Provided that in areas/disciplines where there is no, or only a limited number of peer-reviewed or refereed journals, the Higher Educational Institution may relax the above condition for recognition of a person as Research Supervisor with reasons recorded in writing.

Adjunct Faculty members shall not act as Research Supervisors and can only act as co-supervisors.

However, Co-Supervisor can be allowed in inter-disciplinary areas from other departments of the same institute or from other institutions with the approval of the Doctoral Committee.

In case of interdisciplinary/multidisciplinary research work, if required, a Co-Supervisor from outside the University may be appointed.

A Research Supervisor who is a Professor, at any given point of time, can guide a maximum of 8 Ph.D., scholars only. An Associate Professor upto a maximum of 6 Ph.D., scholars and an Assistant Professor upto a maximum of 4 Ph.D., scholars.

In case of relocation of a female Ph.D. scholar due to marriage or otherwise, the research data shall be allowed to be transferred to the Higher Educational Institution to which the scholar intends to relocate, provided all the other conditions in these Regulations are followed, and the research work does not pertain to a project sanctioned to the parent Institution/Supervisor by any funding agency. Such scholar shall, however, give due credit to the parent institution and the supervisor for the part of research already undertaken.

Faculty members with less than three years of service before superannuation shall not be allowed to take new research scholars under their supervision. However, such faculty members can continue to supervise Ph.D. Research scholars who are already registered until superannuation and as a co-supervisor after superannuation, but not after attaining the age of 70 years.

#### **11.0 Admission of International students in Ph.D., programme.**

Each supervisor can guide up to two international research scholars on a supernumerary basis over and above the permitted number of Ph.D. scholars as specified.

#### **12.0 Change of Research Supervisor**

Transfer of Ph.D., scholars from one Research supervisor to another Research supervisor shall be permitted under the following conditions:

- i. If the Research Supervisor resigns and leaves the institution.
- ii. If the Research Supervisor expresses unwillingness to guide the candidate
- iii. If the Research Scholar expresses his/her unwillingness to work under a specific Research Supervisor.

- iv. By mutual consent.
- v. A fee of ₹2000 has to be paid towards the change of Research Supervisor, if the change is requested by the Research scholar.

### 13.0 Doctoral Committee (Research Advisory Committee as per UGC)

There shall be a Doctoral Committee (Research Advisory Committee as per UGC) for every Ph.D., scholar to monitor the progress of his/her research work. The Research Supervisors in consultation with Head of the Department shall furnish a panel of minimum five experts with doctoral qualification in their respective research field, from the other Academic Institutions / National Laboratories and established research laboratories. From this list one will be nominated as a external expert for each Ph.D research scholar. The Research Supervisor of the research scholar shall be the convener of the Doctoral Committee. The Co- Supervisor, if applicable, shall also be a member. In the absence of Research Supervisor, the Co-Supervisor can be the convenor of the Doctoral Committee. **The Doctoral Committee Meeting shall be conducted in presence of Ph.D Research Supervisor and the nominated external expert.** If a Doctoral Committee member is away from his/her place of work for a longer period, the Research Supervisor shall request for an alternate member from the Panel of experts submitted.

### 13.1 Functions of Doctoral Committee (Research Advisory Committee as per UGC):

The Research Supervisor of the Ph.D. scholar concerned shall be the Convener of this committee, and this committee shall have the following responsibilities:

- i. To review the research proposal and finalize the topic of research.
- ii. To guide the Ph.D. scholar in developing the study design and methodology of research and identify the course(s) that he/she may have to do.
- iii. To periodically review and assist in the progress of the research work of the Ph.D. scholar.

Each semester, a Ph.D. scholar shall appear before the Doctoral Committee in the Karpagam Academy of Higher Education campus to make a presentation and submit a brief report on the progress of his/her work for evaluation and further guidance. The Doctoral Committee shall submit its recommendations along with a copy of Ph.D. scholar's progress report to The Registrar, Karpagam Academy of Higher Education. A copy of such recommendations shall also be provided to the Ph.D. scholar.

The first Doctoral Committee meeting of a scholar which shall be conducted within one month from the date of registration shall decide the topic of research, work plan and the course work to be undertaken by the scholar. The Doctoral Committee shall also submit a Panel of three Experts from recognized institutes (other than Parent Institution) along with their CV for question paper setting and evaluation relating to Part –I Examinations.

The scholar shall be permitted for pre-submission presentation after recommended by the Final Doctoral Committee Meeting. The synopsis to be submitted only after the successful completion of pre-submission presentation. The time gap between the date of pre-submission and the date of submission of synopsis shall be atleast one month.

**14.0 Submission of Progress Report:**

Progress report is to be submitted every half-year period during the entire duration of Ph.D., programme

**15.0 Course of Study:**

The course of study of Ph.D., programme consists of Part I Course work and Part II Research work.

**15.1 Part I: Course Work**

Course work comprises the following three theory papers.

Paper I : Research Methodology and Pedagogy

Paper II : Research and Publication Ethics

Paper III : Special Paper (Research Area)

15.2 The course work shall be treated as a prerequisite for Ph.D., preparation. The credit assigned to the Ph.D. course work shall be 12 credits.

Paper I on Research Methodology and Pedagogy a minimum of four credits shall be assigned which could cover areas such as quantitative methods, computer applications, research ethics and review of published research in the relevant field, training, field work, etc.

Paper II Research and Publication Ethics and Paper III Special Paper carry 4 credits each. The total number of special papers in each discipline shall be 10. The candidate has to select one among the 10, in consultation with the Research Supervisor.

The Credit requirement for the Ph.D. coursework is a minimum of 12 credits, including a "Research and Publication Ethics" course as notified by UGC vide D.O. No. F.1- 1/2018(Journal/CARE) in 2019 and a research methodology course. The Research Advisory Committee can also recommend UGC recognized online courses as part of the credit requirements for the Ph.D. programme.

Ph.D. scholars, irrespective of discipline, shall be trained in teaching / education / pedagogy / writing related to their chosen Ph.D. subject during their doctoral period. Ph.D. scholars will also be assigned 4-6 hours per week of teaching/research assistantship for conducting tutorial or laboratory work and evaluations.

The Full-Time scholar is required to write all the three courses within six months and for Part time the research scholar has to write within one year, from the date of registration, but has to pass all the courses within a maximum of one and half years (three attempts). If the scholar fails to complete course work within one and half years (three attempts) his/her registration will stand automatically cancelled.

15.3 A Ph.D., scholar has to obtain a minimum of 55% of marks or its equivalent grade in the UGC 10 point scale in the course work in order to be eligible to continue the programme and submit the dissertation/thesis.



The pattern of question paper for course work for Ph.D., programme is given below.

**Pattern of Question Paper** (Common for FASCM /FoE/FoP)(For Course Work in Ph.D, Programme)

**Part – A** (5 X 7 = 35 marks - Answer any FIVE out of Seven)

**Part – B** (5 X 10 = 50 marks - Answer any FIVE out of Ten)

**Part – C** (1 X 15 = 15 marks - Compulsory Question)

#### **15.4. Part II: Research Work**

Upon satisfactory completion of course work and obtaining the marks/grade prescribed, the Ph.D., scholar shall be required to undertake research work. The Ph.D., candidates shall select an original research topic within the chosen area of research specialization. At the end of the minimum period of duration the candidates are eligible to submit the thesis.

#### **16.0 Publication of Articles**

Before sending the articles for publication, the article/manuscript is to be submitted to Scrutiny Committee for language and technical scrutiny with a fee of ₹450 per article. After publication, the candidate has to submit the copy of his/her article to the members of the Doctoral Committee.

#### **16.1 Publication of a minimum of two articles is mandatory for submission of a thesis.**

16.2 Condition for submission of thesis:

It is Mandatory for the Ph.D., Scholars to publish two research articles for submission of his/her of Ph.D., thesis as mentioned below:

- (i) Engineering, Science and Pharmacy: One article should be in SCI / SCIE / Web of Science and another one in Scopus
- (ii) Commerce, Management, Arts: One in Scopus and another one in Peer reviewed / UGC care listed Journals
- (iii) To attend at-least two timeline presentations and two annual research congress

#### **17.0 Pre-Submission Presentation**

The Pre-submission will be permitted only when the research scholar has either published his/her article or it has been accepted for publication provided the date of publication of the article is given in the acceptance letter for publication in an approved Journal. All the published papers by the scholar shall have name of the Research Supervisor and Karpagam Academy of Higher Education. Papers without the name of the Research Supervisor and Karpagam Academy of Higher Education will not be accounted. The Research Scholar should be one among the first two authors in the paper.

Prior to submission of the synopsis, the scholar shall make Pre-submission presentation and it is open to all faculty members and research students, and their feedback and comments if any may suitably be incorporated in the draft synopsis and thesis in consultation with Doctoral Committee. A notification may be issued to all the Departments regarding the same. The report in the prescribed format shall be forwarded

by the Research Supervisor to the Research section on the same day along with the certificate of bonafide research work done.

**18.0. Plagiarism (Turnitin Software):**

18.1 The research scholar has to submit his/her synopsis and thesis for checking plagiarism on payment of prescribed fee. If the percentage of plagiarism is more than 10% the thesis will not be accepted for submission. Same is the case for manuscripts and synopsis.

18.2 Further while submitting for evaluation, the thesis shall have an undertaking from the research scholar and a certificate from the Research Supervisor attesting the originality of the work, vouching that the plagiarism is less than 10% and that the work has not been submitted for the award of any other degree/diploma of the same Institution where the work was carried out, or any other Institution.

18.3 In any case if scholars have committed an act of plagiarism with more than 10%, his/her Thesis / degree shall be withdrawn and his / her registration shall be cancelled and also, he / she shall be debarred to register for any other programme in the Karpagam Academy of Higher Education. Appropriate legal action shall also be initiated.

18.4 Research Supervisor ship of the Supervisor will also be withdrawn.

**19.0. Submission of synopsis**

The research scholar who has successfully completed the course work alone is eligible to submit the synopsis. He/she shall be permitted to submit the synopsis during the last quarter of the eligible minimum period on the recommendation of the Final Doctoral Committee Meeting and after Pre-submission Presentation. The research scholar shall submit five copies of synopsis with a soft copy along with prescribed application through the Research Supervisor to the Controller of Examinations. Synopsis shall be accepted only when the Panel of Examiners is submitted to Controller of Examinations. In case the panel is exhausted, the Vice Chancellor can either call for a fresh panel of examiners from the Research Supervisor or nominate examiner(s).

**19.1 Submission of thesis**

Five copies of thesis with flexible cover along with soft copy (PDF format) shall be prepared in accordance with the format and specifications prescribed. Thesis shall be submitted together with the prescribed application form along with the prescribed fee, within three months from the date of submission of the synopsis.

All the Ph.D., scholars are encouraged to submit their thesis within the stipulated time period. However, for those candidates who have submitted synopsis but unable to submit the thesis within the stipulated period, an extension of three months will be allowed on payment of ₹ 2000/- as extension fee. If the candidate fails to submit within the extension period of three months, he / she has to pay full year fee for all the years till he / she submits the thesis.

**20.0 Evaluation of the Thesis**

- 20.1 The Ph.D. thesis submitted by a Ph.D. scholar shall be evaluated by his/her Research Supervisor and atleast two external examiners who are experts in the field. Such examiner(s) should be academics with a good record of scholarly publications in the field. Wherever possible, one of the external examiners should be chosen from outside India. The viva-voce board shall consist of the Research Supervisor and at least one of the two external examiners and may be conducted offline.
- 20.2 The viva-voce of the Ph.D. scholar to defend the thesis shall be conducted if both the external examiners recommend acceptance of the thesis after incorporating any corrections suggested by them. If one of the external examiners recommends rejection, the Institution concerned shall send the thesis to an alternate external examiner from the approved panel of examiners, and the viva-voce examination shall be held only if the alternate examiner recommends acceptance of the thesis. If the alternate examiner does not recommend acceptance of the thesis, the thesis shall be rejected, and the Ph.D. scholar shall be declared ineligible for the award of a Ph.D.
- 20.3 Each member of the Board shall adjudicate the thesis and shall submit a detailed report as given in the prescribed form on the merits and demerits of the thesis and finally explicitly indicate whether the thesis is Recommended or Recommended for Resubmission or Not Recommended within a period of 6 months.
- 20.4 If the evaluation report from the examiner is not received within 6 Months, another examiner will be appointed from the panel of examiners.
- 20.5 As soon as the reports of evaluation are received from the examiners by Controller of Examinations, they shall be sent to the Research Supervisor (Convener) for consolidation of the reports.
- 20.6 If the examiners insist on corrections to be made in the thesis, the same shall be made before appearing for the Public viva-voce examination, along with a certificate as given below from the Research Supervisor that the corrections have been satisfactorily carried out.

A Ph.D. scholar shall submit the thesis for evaluation, along with (a) an undertaking from the Ph.D. scholar that there is no plagiarism and (b) a certificate from the Research Supervisor attesting to the originality of the thesis and that the thesis has not been submitted for the award of any other degree/diploma to any other Higher Educational Institution.

<p><b>CERTIFICATE</b></p> <p>This is to certify that all corrections, modifications suggested by the examiners of the thesis entitled, “.....”submitted by Mr./Ms ..... have been incorporated and resubmitted. The thesis may be accepted.</p> <p style="text-align: right;"><b>Signature of the Research Supervisor</b></p>
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- 20.7 In case of a thesis, which has not been specifically ‘recommended’ or ‘not recommended’ but revision and resubmission is suggested, the thesis shall be

revised and the thesis duly certified by the Research Supervisor be sent to the same examiner who has suggested the revision for obtaining the recommendation.

- 20.8 The time-limit to resubmit the revised thesis, as per the suggestions for revision and resubmission of thesis by the examiner(s) shall not exceed twelve full months. A candidate shall not ordinarily be permitted to submit the thesis for the degree or to take the public viva-voce examination on more than two occasions.
- 20.9 The viva-voce shall be conducted by the Research Supervisor and atleast by one of the two external examiners, on the critiques given in the evaluation report. It is open to DC Members, all faculty members, research scholars and other interested experts/researchers.
- 20.10 The first notification for Ph.D., viva-voce shall be issued only after the Research Supervisor of the candidate, receives the approval from the authorities to issue the first notice.
- 20.11 15 clear days' notice may be required to be given for issue of the second notification from the date of the first notification. Similarly, 15 clear days are required to be given for conducting the public viva-voce from the date of issue of the second notification.
- 20.12 The Research Supervisor shall fix the date and time of the viva-voce in consultation with the External Examiner and Head of the Department concerned. After conducting the public viva-voce, the Research Supervisor shall convey to the Controller of Examination, the result of such examination endorsed by the External Examiner along with list of participants, recommending for the award of Ph.D.,
- 20.13 A candidate who is not successful in the Public viva-voce may be permitted to undergo the Public viva-voce second time, within a period of three months but not before one month after the first viva-voce.
- 20.14 The entire process of evaluating a Ph. D. thesis, including the declaration of the viva-voce result, within a period of six (6)months from the date of submission of the thesis.

### **21.0 Award of the Degree**

A candidate who has successfully completed the public viva-voce shall be declared to have qualified for the award of Ph.D., degree of Karpagam Academy of Higher Education. Viva voce evaluation of the thesis shall be conducted offline. Prior to actual award of the degree, provisional certificate shall be issued after approval by the Board of Management.

Issuing a Provisional certificate:

Prior to the actual award of the Ph.D. degree, the degree- awarding Higher Educational Institution shall issue a provisional certificate to the effect that the Ph.D. is being awarded in accordance with the provisions of these Regulations.

Award of Ph.D. degrees:

Award of degrees to candidates registered for the Ph.D. programme on or after November,07, 2022 shall be governed by University Grants Commission (Minimum Standards and Procedures for Award of Ph.D. Degree) Regulations, 2022.

**Depository with INFLIBNET:**

Following the successful completion of the evaluation process and before the announcement of the award of the Ph.D. degree(s), the Karpagam Academy of Higher Education shall submit an electronic copy of the Ph.D. thesis to INFLIBNET, for hosting the same so as to make it accessible to all the Higher Educational Institutions and research institutions.

**22.0. Cancellation of Registration**

The registration of a research scholar shall stand cancelled if -

- The research scholar has not paid the prescribed fee within the stipulated time;
- The Full-Time candidate has not completed his course work within one and half years (three attempts) and Part-Time candidates within two years (three attempts)
- The progress report is not submitted consecutively or the progress reports are not satisfactory as decided by the Doctoral Committee;
- The maximum period stipulated for the programme exceeded; and
- The research scholar withdraws from the course voluntarily.

In all the above cases, the fees paid by the research scholar shall be forfeited. However, such candidates may be permitted for fresh registration.

**23.0 Publication of the thesis**

The candidate may publish his/her thesis on the recommendation of the Research Supervisor in the format as given below and after getting permission from the Karpagam Academy of Higher Education. At least ten copies of the published work should be given to the Karpagam Academy of Higher Education at free of cost. Permission for publication of the thesis should be obtained within FIVE years of the award of the degree. All the publications arising out of the research work shall have the name of Karpagam Academy of Higher Education. Due credit shall be given to the Institution and Research Supervisor if any patent is filed out of the work undertaken during the period of research.

**[CERTIFICATE]**

This is to certify that the thesis entitled, “.....” submitted by Mr. / Ms. .... does not contain any objectionable material and is a record of original and independent research work done by him/her. Hence the thesis is fit for publication, if the candidate so desires.

**Signature of the Research Supervisor**

**24.0 Conferment of the Degree**

Candidates who qualify for the Ph.D., degree shall be awarded the degree in the discipline in which he/she has registered.

**25. Preparation and Submission of Synopsis and Thesis**

**25.1 Preparation of Synopsis**

Synopsis should outline the research problem, the methodology adopted and the summary of the findings. The synopsis should not exceed 10 pages from the first page to the last page including the List of Publications. The sequence in which the Synopsis should be arranged is as follows:

- i. Cover Page and Title page (as shown in the Annexure I) (Page No.17& Page No.18)
- ii. Text divided into suitable Headings (numbered consecutively)
- iii. References
- iv. List of Publications (those published / accepted for publication in Journals and papers presented in Conferences / Symposia)
- v. Standard A4 size (297mm x 210mm) paper shall be used for preparing the copies.

Top edge: 30 mm

Bottom edge: 30 mm

Left side: 35 mm

Right side : 25 mm

The Synopsis should be prepared on good quality white bond paper preferably not lower than 80 gsm. One and a half spacing should be used for typing the general text. The general text shall be typed in Font Style Times New Roman and Font Size 12. All page numbers (Arabic numbers) should be typed without punctuation on the upper right hand corner. Synopsis should be bound using flexible cover of thick white art paper. The cover should be printed in black letters and the text for printing should be identical to what has been prescribed for the title page. References, if any cited in the text of the Synopsis, should be listed at the end of the Synopsis under the heading "REFERENCES" as per the following format:

### References

#### I. References cited from published research papers should be in the following format:

##### a. Single author

Wattenberg, L.W.,2008.Chemoprevention of cancer. Cancer Research., 45:1-8.

##### b. Two authors

Defendi, V. and B. Pearson, 2012. Quantitative estimation of succinic dehydrogenase activity in a single microscopic tissue section. Journal, Histochemistry, Cytochemistry, 3: 61-64.

##### c. More than two authors

Kristan K., M. Kotnik, M. Oblak and U.J. Urleb, 2009. New high throughput fluorimetric assay for discovering inhibitors of UDP-N-acetylmuramyl-l-alanine: d-glutamate (MurD)lLigase.Biomol. Screen, 14: 412-418.

#### II. References cited from a published book

Vuković-Gačić, B. and D.Simić, 2010. Identification of natural antimutagens with modulating effects on DNA repair, In: Antimutagenesis and anti-carcinogenesis mechanisms III (Eds. G.Bronzzeti, H. Hayatsu, S. De Flora, M.D. Waters and D.M. Shankel), Plenum Press, New York,269-277.

#### III. References cited from approved Thesis / Dissertation

Ratnakar, P., 2012. Biochemical studies of *Allium sativum* Linn. (Garlic). Ph.D., Thesis, Delhi University. P. 87.

## 25.2 Preparation of Thesis

**A. General**

In general, the Thesis shall be presented, in an organized and scholarly fashion, the original research work of the research scholar.

**B. Size of Thesis**

The size of the Thesis should not exceed 250 pages of typed matter reckoned from the first page of Chapter 1 to the last page of the Conclusion Chapter exclusive of tables, photographs, figures, references & appendices.

**C. Sequence of the Contents of the Thesis**

The sequence in which the Thesis material should be arranged is as follows:

- i. Cover Page and Title page (as shown in Annexure II Page 19& Page 20)
- ii. Bonafide Certificate (as shown in Annexure III Page 21)
- iii. Declaration and Certificate from the Research Supervisor and co-Research Supervisor (if any)(as shown in Annexure IV Page 22& V Page 23)
- iv. Acknowledgement
- v. Table of Contents
- vi. List of Symbols and Abbreviations.
- vii. Abstract
- viii. Chapters
- ix. References
- x. Appendices
- xi. List of Publications- only title of the paper with ISSN and other details.

**D. Page Dimensions and Margin**

The dimensions of the final bound Thesis report (5 copies) should be 290 mm x 205mm. Page margins: Tables and Figures should conform to the margin specifications. Large sized figures may be as it is or otherwise reduced to the appropriate size before insertion.

**E. Bonafide Certificate**

The Bonafide Certificate shall be typed in **double line spacing** using Font Style Times New Roman and Font Size 12 as per the format shown in Annexure III. The certificate shall carry the Supervisor's signature and shall be followed by the Supervisor's name, academic designation, department and full address of the institution where the Research Supervisor has guided the research scholar.

**F. Acknowledgement**

It should be brief and should not exceed two pages when typed in double spacing. The scholar's signature shall be made at the bottom right end above his / her name typed in capitals.

**G. Table of Contents**

The Table of contents should list all captions from items v to xi following it. The title page, Bonafide Certificate and Declaration Certificate will not find a place among the items listed in the Table of Contents but the page numbers must be typed in lower case Roman letters in all the pages (excepting No. i on the Title page). One and a half spacing should be adopted for typing the matter under Table of Contents.

## **H. List of Symbols and Abbreviations**

One and a half spacing should be adopted for typing the matter under this head. Standard symbols, abbreviations, etc. should be used. The list should be arranged alphabetically with respect to the contents on the right side.

## **I. Abstract**

Abstract should be an essay type of narration not exceeding four pages outlining the research problem, methodology used for solving it and a summary of the findings. This shall be typed in double line spacing using Font Style Times New Roman and Font Size 12.

## **J. Chapters**

The chapters may be broadly divided into Introduction, Review of Literature, Material and Methods, Results, Discussion, Summary and References.

- a. Each chapter should be given an appropriate title.
- b. Tables and Figures in a chapter should be placed in the immediate vicinity of the reference where they are cited.
- c. Footnotes should be used sparingly. They should be typed single space and placed directly underneath in the very same page which refers to the material they annotate.

## **K. List of References**

The listing of references cited in the text should be typed in single line spacing starting from 4 lines spaces below the heading "REFERENCES". The reference material should be listed in the alphabetical order of the first author of each reference. The name of the author / authors should be immediately followed by the other details and year. The cited references in the Text should be listed "REFERENCES" as per the specified format:

## **L. Appendices**

Appendices are provided to give supplementary information's relevant to the research work done by the candidate.

## **M. List of Publications**

Reprints / Photostat copies of research papers already published / accepted for publication in Journals are to be attached in chronological orders and these pages need not be numbered. The heading "List of Publications" alone must find a place in the Table of Contents without page numbers for this item only.

## **N. Tables and Figures**

"Table" means tabulated numerical data in the body of the Thesis as well as in the appendices. All other non-verbal material used in the body of the Thesis and appendices such as charts, graphs, maps, photographs and diagrams may be designated as Figures.

- a. A Table or Figure including caption should be accommodated within the prescribed margin limits and appear on the page following the page where their first reference is made.
- b. Tables and Figures on half page or less in length may appear on the same page along with the text. However, they should be separated from the text both above and below by triple spacing.



- c. All Tables and Figures should be prepared on the same paper or material used for the preparation of the rest of the Thesis.
- d. Two or more small Tables or Figures may be grouped, if necessary, in a single page.
- e. Wherever possible, the photograph(s) shall be reproduced on a full sheet of photographic paper or colour xerox.
- f. More than one photograph can be included in a page.
- g. Samples of Fabric, Leather, etc., if absolutely necessary may be attached evenly in a page and fixed/pasted suitably and should be treated as Figures.

## **O. Typing Instructions**

### **General**

This section includes additional information for final typing of the Thesis. The impressions on the typed / photo-stated / printed copies should be black in colour.

A sub-heading at the bottom of a page must have at least two full lines below it or else it should be carried over to the next page.

The last word of any page should not be split using a hyphen. One and a half spacing should be used for typing the general text. The general text shall be typed in Font Style Times New Roman and Font Size 12. Single spacing should be used for typing:

- (i) Long Tables
- (ii) Long quotations
- (iii) Foot notes
- (iv) Multiline captions
- (v) References

All quotations exceeding one line should be typed in an indented space – the indentation being 15 mm from either side of the margin.

## **P. Page Numbering**

All page numbers (small case Roman numerals or Arabic numbers) should be typed without punctuation on the **upper right hand corner** 20 mm from the top with the last digit of the number in line with the right hand margin. The preliminary pages of the Thesis (such as Title page, Bonafide Certificate, Declaration and Certificate, Table of Contents, Acknowledgement, List of Symbols and Abbreviations and Abstracts) should be numbered in lower case Roman numerals. The Title page will be numbered as (i) but this should not be typed on the page. The page immediately following the Title page shall be numbered as (ii) and it should appear **at the top right hand corner** as already specified. Pages of main text, starting with Chapter 1 should be consecutively numbered using Arabic numerals.

## **Q. Numbering of Chapters, Divisions and Sub-Divisions**

The numbering of chapters, divisions and sub-divisions should be done using Arabic numerals only and further decimal notation should be used for numbering the divisions and sub-divisions within a chapter. For example, sub-division 4 under division 3 belonging to chapter 2 should be numbered as 2.3.4. The caption for the sub-division should immediately follow the number assigned to it.

Every chapter beginning with the first chapter should be serially numbered using Arabic numerals. Appendices, included if any, should also be numbered in an identical manner starting with Appendix 1.

**R. Numbering of Tables and Figures**

Tables and Figures appearing anywhere in the Thesis should bear appropriate numbers. The rule for assigning such numbers is illustrated by an example. Thus, if a Figure in Chapter 3, happens to be the fourth then assign 3.4 to that Figure. Identical rules apply for Tables except that the word Figure is replaced by the word Table. If Figures (or Tables) appear in appendices, then Figure 3 in Appendix 2 will be designated as Figure A 2.3. If a table is to be continued into the next page this may be done, but no line should be drawn underneath an unfinished Table. The top line of the Table continued into the next page should, for example read Table 2.1 (continued) placed centrally and underlined.

**S. Numbering of Equations**

Equations appearing in each Chapter or Appendix should be numbered serially, the numbering should commence afresh for each Chapter or Appendix. Thus, for example, an equation appearing in Chapter 3, if it happens to be the eighth equation in that Chapter should be numbered as (3.8) thus (3.8) While referring to this equation in the body of the Thesis it should be referred to as Equation (3.8).

**T. Binding Specifications**

Thesis should be bound with **black calico cloth** and using flexible cover of thick white art paper. The cover should be printed in black letters and the text for printing should be identical to what has been prescribed for the title page.

Soft copy of the Thesis (PDF format) written in CD (2 Nos.) should be submitted for Karpagam Academy of Higher Education archives.

**Revision of Regulation:**

The Karpagam Academy of Higher Education may from time to time, amend the Regulations based on UGC Regulations if found necessary.

**ANNEXURE I**

**Specimen of Cover Page and Title Page**

<Font Style Times New Roman>

**ANTIOXIDANT ACTIVITY OF INDIAN MEDICINAL PLANTS FROM WESTERN GHATS**

Font Size 18><1.5 line spacing>

**SYNOPSIS**

<Font Size 14>

***Submitted by***

<Font Size 14><Italic>

**RAGHAVENDRA S A**

<Font Size 16>

***in partial fulfilment of the requirements for the award of the degree of***

<Font Size 14><Italic><1.5 line spacing>

**DOCTOR OF PHILOSOPHY**

<Font Size 16>

**IN**

**BIOTECHNOLOGY**

<Font Size 14>



**DEPARTMENT OF BIOTECHNOLOGY**

**Karpagam Academy of Higher Education**

(Deemed to be University) (Established Under Section 3 of UGC Act, 1956)

(Accredited with A+ Grade by NAAC in the Second Cycle)

Pollachi Main Road, Eachanari Post, Coimbatore – 641 021, Tamil Nadu, India

<Font Size 16><1.5 line spacing>

**December, 2022**

<Font Size 14>

**ANTIOXIDANT ACTIVITY OF INDIAN MEDICINAL PLANTS FROM  
WESTERN GHATS**

**SYNOPSIS**

*Submitted by*

**RAGHAVENDRA S A**

*in partial fulfilment of the requirements for the*

*award of the degree of*

**DOCTOR OF PHILOSOPHY  
IN  
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**DEPARTMENT OF BIOTECHNOLOGY**

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Pollachi Main Road, Eachanari Post, Coimbatore – 641 021, Tamil Nadu, India

**December, 2022**

**ANNEXURE II**

**Specimen of Cover Page and Title Page**

<Font Style Times New Roman>

**ANTIOXIDANT ACTIVITY OF INDIAN MEDICINAL PLANTS FROM WESTERN  
GHATS**

<Font Size 18><1.5 line spacing>

**THESIS**

<Font Size 14>

***Submitted by***

<Font Size 14><Italic>

**RAGHAVENDRA S A**

<Font Size 16>

***in partial fulfilment of the requirements for the award of the degree of***

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<Font Size 14>



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<Font Size 16><1.5 line spacing>

**December, 2022**

<Font Size 14>

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Pollachi Main Road, Eachanari Post, Coimbatore – 641 021, Tamil Nadu, India

**December, 2022**

**ANNEXURE III**

**Specimen of Bonafide Certificate**

<Font Style Times New Roman>

**KARPAGAM ACADEMY OF HIGHER EDUCATION  
COIMBATORE-21**

<Font Size 16>

**BONAFIDE CERTIFICATE**

<Font Size 14>

<Font Size 12>

Certified that this Thesis entitled  
“\_\_\_\_\_” is the bonafide  
work of Mr./Ms. \_\_\_\_\_ who carried out the  
research under my supervision. Certified further, that to the best of my knowledge the work  
reported herein does not form part of any other thesis or dissertation on the basis of which a  
degree or award was conferred on an earlier occasion in this or any other scholar.

<<Signature of the Co Supervisor>>

<<Name>>

CO SUPERVISOR

<<Designation & Address >>

(If applicable)

<<Signature of the Supervisor>>

<<Name>>

SUPERVISOR

<<Designation & Address >>

**ANNEXURE IV**

**Specimen of Declaration**

<Font Style Times New Roman>

**DECLARATION**

<Font Size 16>

<Font Size 12>

I \_\_\_\_\_ hereby declare that the thesis entitled  
“ \_\_\_\_\_ ”  
submitted to the Karpagam Academy of Higher Education, in partial fulfillment of the  
requirements for the award of the Degree of Doctor of Philosophy in  
\_\_\_\_\_ is a record of bonafide and  
independent research work done by me during the period from \_\_\_\_/\_\_\_\_/\_\_\_\_ to \_\_\_\_-  
\_\_\_\_/\_\_\_\_/\_\_\_\_ under the supervision and guidance of  
Dr. \_\_\_\_\_, Department of  
\_\_\_\_\_ at Karpagam Academy of Higher Education, and it has not  
formed the basis for the award of any Degree / Diploma / Associate ship / Fellowship or other  
similar title to any candidate in Karpagam Academy of Higher Education so far.

**Signature of the Research Scholar**



**ANNEXURE V**

**Specimen of Certificate**

<Font Style Times New Roman>

**CERTIFICATE**

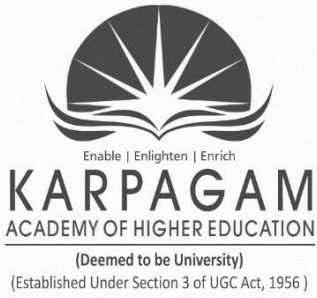
<Font Size 16>

<Font Size 12>

This is to certify that the thesis entitled  
“\_\_\_\_\_” submitted to the Karpagam  
Academy of Higher Education, in partial fulfillment of the requirements for the award of the  
Degree of Doctor of Philosophy in \_\_\_\_\_ is a record of  
bonafide research work done by Mr. / Ms. \_\_\_\_\_ during  
the period from \_\_\_\_/\_\_\_\_/\_\_\_\_ to \_\_\_\_/\_\_\_\_/\_\_\_\_ of his / her study in the  
Department of \_\_\_\_\_ at Karpagam Academy of  
Higher Education, under my supervision and guidance and the thesis has not formed the basis  
for the award of any Degree / Diploma / Associate ship / Fellowship or other similar title to any  
candidate of Karpagam Academy of Higher Education so far.

**Countersigned**  
**Head of the Department**

**Signature of the Research Supervisor**



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Phone: 0422 - 2980011- 14 | Email : info@kahedu.edu.in

*This is a Format only (Neatly typed, aligned and duly signed form to be submitted)*

## FORMAT I

### Progress Report of Research Scholar

(To be submitted once in six months)

1. Programme : Ph.D., FT/PT
2. Subject :
3. Name & Regn.No. of the Research scholar:
4. Title of Ph.D., Research work :
5. Report No./Month/Year :

No.	Month	Year

6. Brief report about the work carried

out by the Research scholar :

- a. Article/s published \_\_\_\_\_ No's (Attach copies)
- b. Seminars/Conferences attended \_\_\_\_\_ (Attach certificate copies)
- c. Course work: Completed / Not Completed (Attach copy of Mark sheet)
- d. Course fee: Paid till \_\_\_\_\_(copies of receipts)

7. Research Guide's Comment :

Signature of the Research Scholar  
(with Name & address)  
Mobile No.:  
E-mail id:

Signature of the Research Supervisor  
(with Name & address)  
Mobile No.:  
E-mail id:



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## FORMAT II

### Request for Pre-submission presentation

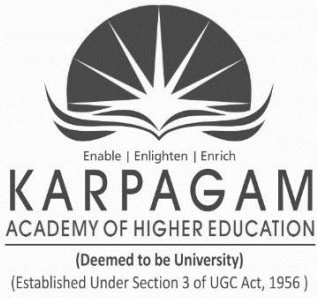
#### Check list

1. Name of the research scholar with Registration Number :
2. Name of the Research Supervisor :  
Designation :  
Department :
3. (a) Whether the minimum period completed? : Yes/No (Refer Registration Communication)  
(b) If extension obtained, attach particulars :
4. Whether course fee paid for all the years : Yes/No (Attach No Dues Certificate)
5. Title of Ph.D. Research work :
6. Details of the Part I Course work :  
(Enclose necessary documents)
7. Number of DC Meetings attended (Annually 2) :
8. Total No. of 6 months performance reports submitted : 6/8/10/12
9. (a) No. of Time-line presentations attended :  
(b) No. of Annual Research Congress attended :
10. (a) Minimum No. of Research articles to be published : 2 as per KAHE regulation  
(b) No of articles published by the scholar :  
(Attach photocopies of reprints)
11. Whether submission of thesis is recommended  
at the Final Doctoral Committee Meeting and  
date of DCM :
12. Communication skill\* : Good/Satisfactory/Need improvement  
(To be judged based on the DC Meeting,  
Time line Presentation and  
Annual Research Congress) (Tick whichever is applicable)

**Signature of the Research Scholar  
Supervisor**

**Signature of the Research**

\*The Guide/HOD shall give specific remarks about the communication skill of the scholar. At the time of Pre-submission Presentation, if it is found that the Communication skill of the scholar is less than average, the period of submission may be extended for one more year and the scholar shall be advised to improve his/her Communication skill and may be presented again.



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## FORMAT III

KAHE / RS / Rx /Ph.D./Dept./ Pre-Sub / xxxx / 2022/

Date: \_\_\_\_\_

### Pre-Submission presentation of the Ph.D. research - Notification

I am by direction to inform you that a Pre-submission Presentation of the Ph.D., thesis is arranged for the candidate \_\_\_\_\_ working under the supervision of \_\_\_\_\_, Designation, Department of \_\_\_\_\_, Karpagam Academy of Higher Education, Coimbatore – 641 021.

**Ph.D. Thesis Title:** “ \_\_\_\_\_ ”.

All members of faculty, experts and all interested persons are requested to attend the aforesaid Pre-submission Presentation.

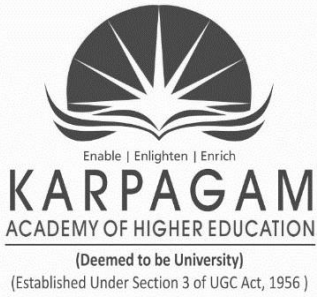
Venue :  
Date :  
Time :

**Registrar**

**To**

All Head of the Department of \_\_\_\_\_, requested to make necessary arrangement to conduct the programme.

Kindly circulate to Dean / Director / Research Supervisor / Research Scholars



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**FORMAT - IV**

DEPARTMENT OF \_\_\_\_\_  
**Pre-submission Presentation Report**

- |   |   |
|---|---|
|   | Date:   |
| 1. Name of the Research Scholar   | :   |
| 2. Register Number of the Research Scholar  | :   |
| 3. Ph.D., programme in  | :   |
| 4. Department   | :   |
| 5. Name of the Research Supervisor  | :   |
| Designation   | :   |
| Department  | :   |
| 6. Presentation date & Venue  | :   |
| 7. No. of articles published by the scholar   | :   |
| 8. Number of members present in<br>the presentation (enclose the<br>attendance sheet)                     | :   |
| 9. A report on the Question & Answer Session<br>(in the enclosed format)                                  | :   |
| 10. Comments of the Supervisor  | :   |
| (a) On the composition of the Thesis chapters   | : Adequate/Needs to be revised.   |
| (b) On the Communication skill*<br>(additional sheets may be used)  | : Good/Satisfactory/Needs improvement<br>(Tick whichever is applicable)       |
| 11. After the Pre-submission<br>Presentation whether the scholar<br>may be permitted to submit the Thesis | : Permitted/Extended for one year<br>(Strike out whichever is not applicable) |

**Signature:**

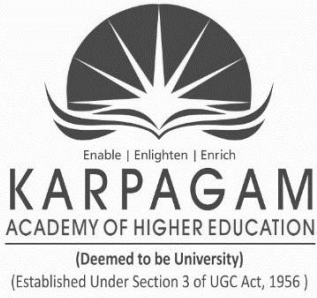
**Research Scholar**

**Research Supervisor**

**HOD**

**Dean**

\*(At the time of Pre-submission Presentation, if it is found that the Communication skill of the scholar is less than average and needs improvement, the period of submission may be extended for one more year and the scholar shall be advised to improve his/her Communication skill and may be presented again.)



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---

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**FORMAT – IV Annexure**

**Pre-submission Presentation: A brief report on the Question & Answer Session**

Answers should be brief and relevant to the question. If needed, additional sheets may be used

**Topic of the Research work:**

**Q1.**

**Answer:**

**Q2.**

**Answer:**

**Q3.**

**Answer:**

**Q4.**

**Answer:**

**Q5:**

**Answer:**

**Signature of**

**Research Scholar**

**Research Supervisor**



Enable | Enlighten | Enrich  
**KARPAGAM**  
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*This is a Format only (Neatly typed, aligned and duly signed form to be submitted)*

**FORMAT V**

## **Pre-submission presentation**

### **Certificate**

**Name & Reg. No. of the research scholar :**

**Subject :**

**Date of Presentation :**

Certified that the above research scholar under my guidance has presented his/her research work during Pre-submission Presentation and his/her presentation is \_\_\_\_\_ . All the suggestions made by the participants are taken into consideration and important suggestions will be included in the thesis entitled:

“ \_\_\_\_\_  
\_\_\_\_\_ ”.

**Place :**

**Date :**

**Signature of the Research Supervisor  
(Name & Address)**

**Counter Signed:**

**HOD  
(Name & Seal)**



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Phone: 0422 - 2980011- 14 | Email : info@kahedu.edu.in

*This is a Format only (Neatly typed, aligned and duly signed form to be submitted)*

**FORMAT - VI**

## Submission of Ph.D., Thesis: Check List

1. Name of the research scholar with Registration Number :
2. Name of the Research Supervisor :  
Designation :  
Department :
3. (a) Whether the minimum period completed? : Yes/No (Refer Registration Communication)
4. (b) If extension obtained, attach particulars :
5. Whether course fee paid for all the years : Yes/No (Attach No Dues Certificate)
6. Title of Ph.D. Research work :
7. Details of the Part I Course work :
8. (Enclose necessary documents)
9. Number of DC Meetings attended (Annually 2) :
10. Total No. of 6 months performance reports submitted : 6/8/10/12  
(a) No. of Time-line presentations attended :  
(b) No. of Annual Research Congress attended :
11. (a) Minimum No. of Research articles to be published : 2 as per KAHE regulation  
(b) No of articles published by the scholar :
12. Whether submission of thesis is recommended at the Final Doctoral Committee Meeting and date of DCM :
13. Date of Pre-Submission Presentation made :  
(Attach a certificate from the supervisor duly countersigned by the HOD)
14. Probable date of submission of Synopsis :
15. Expected date of submission of Thesis :

**Signature of:**

**Research Scholar**

**Research Supervisor**

**HOD**

**For Office of the Research use:**

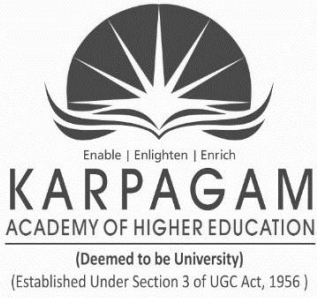
1	2	3	4	5	6	7	8	9	10	11	12	13	14
---	---	---	---	---	---	---	---	---	----	----	----	----	----

Recommendation for submission: **Recommended / Not recommended**

**Addl. Director, Research**

**Director, Research**





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Phone: 0422 - 2980011- 14 | Email : info@kahedu.edu.in

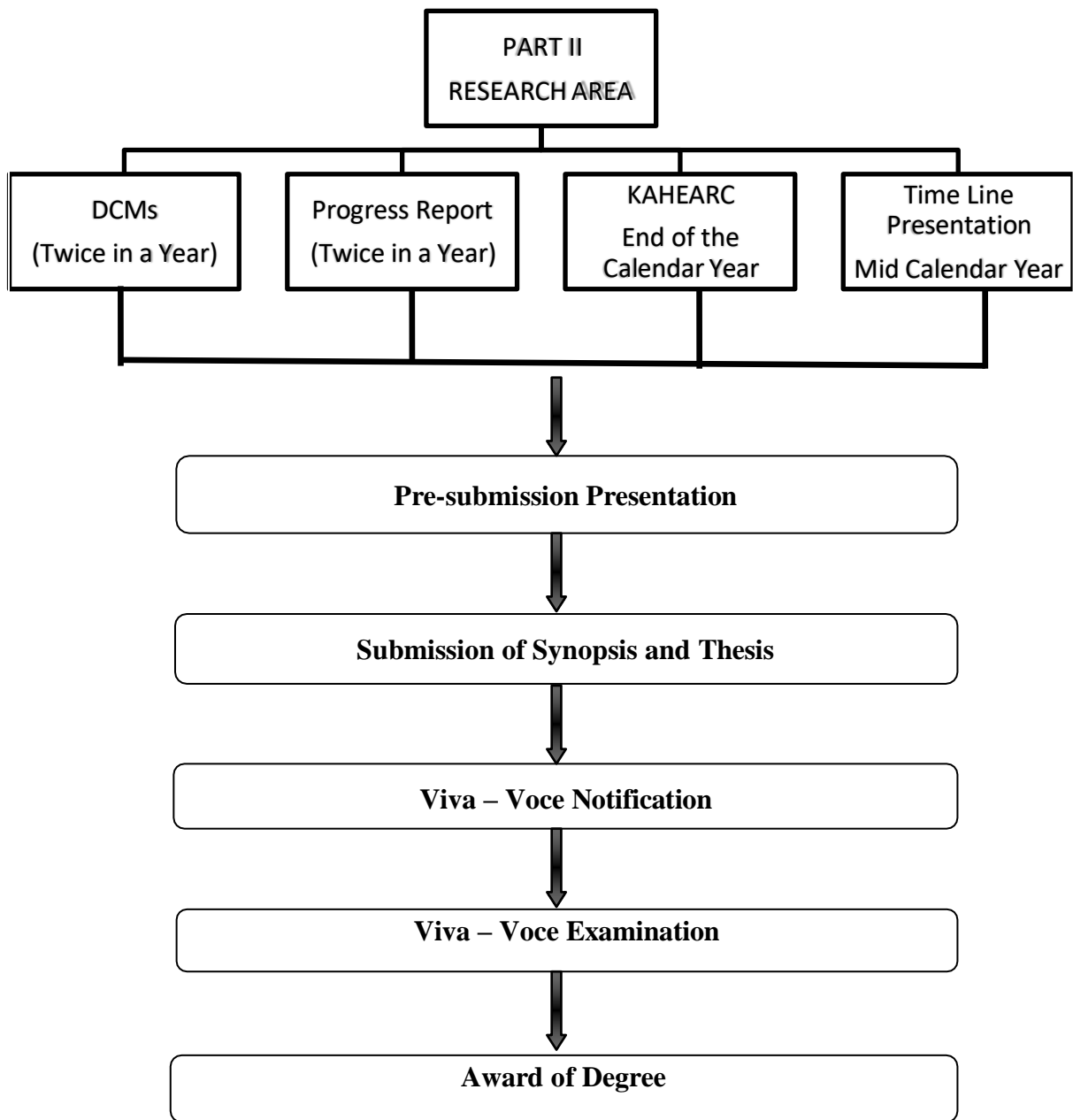
## Certificate of Plagiarism

Certified that the thesis entitled “\_\_\_\_\_” for  
the award of Ph.D., degree has undergone Plagiarism check through Turnitin software and the  
level of plagiarism is \_\_\_\_\_.

Signature of the Research Scholar

Signature of the Research Supervisor

Professor in- charge for Plagiarism Test



## Publications terminology

### 1. Impact Factor

The Impact Factor of an academic journal is a measure which reflects the average number of citations to recent articles published in that Journal.

- It is a measure of the relative importance of a journal in a given field.
- It was devised by **Mr. Eugene Garfield**, the founder of the **Institute for Scientific Information**.
- Impact factor is calculated yearly starting from 1975 for those journals which are indexed in the **Journal Citation Reports**.
- Normally, the impact factor for 2021 is published in 2022.
- It is a journal metric and not to be used to assess an individual researcher or research institution.

### Calculation

Example: If a Journal has an impact factor of 3 in the year 2022; it means that each paper published in that journal during the years 2020 and 2021 had received an average of 3 citations in 2022.

Let A= The number of times that articles published in that journal in and 2021, were cited by articles in indexed journals during 2022.

B= The total number of “citable items” (usually, articles, reviews and proceedings) published in that journal in 2020 and 2021.

Then, Impact factor (in 2022) =  $\frac{A}{B}$

### 2. HIndex

The h-index is an index that attempts to measure both the productivity and impact of the published work of a scientist or scholar. The index is based on the set of the scientist's most cited papers and the number of citations that they have received in other publications. The index can also be applied to the productivity and impact of a group of scientists, such as a department or university or country, as well as a scholarly journal. The index was suggested by Jorge E. Hirsch, a physicist at UCSD (University of California, San Diego), as a tool for determining theoretical physicists' relative quality and is sometimes called the Hirsch index or Hirsch number. The h-index serves as an alternative to more traditional journal impact factor metrics in the evaluation of the impact of the work of a particular researcher.

### 3. Scopus

**Scopus**, officially named **SciVerse Scopus**, is a bibliographic database containing abstracts and citations for academic journal articles. It covers nearly 20,500 titles from over 5,000 international publishers, of which 19,500 are peer-reviewed journals in the scientific, technical, medical, and social sciences (including arts and humanities). It is owned by **Elsevier** and is available online by subscription. Since Elsevier is the owner of Scopus, and is also one of the main international publishers of scientific journals, Elsevier established the independent and international Scopus Content Selection and Advisory Board to prevent a potential conflict of interest in the choice of the periodicals to be included in the database and to maintain an open and transparent content coverage policy. The board consists of scientists and subject librarians from all scientific disciplines and geographical areas, whose interest is to access any relevant information regardless of the publishers.

**SciVerse**

**SciVerse** is a platform for accessing scientific information from certain databases and the web. It is published by **Elsevier**. It provides access to 2,500 journals and 11,000 books with about 500 thousand additions each year.

"**SciVerse**" globally indexes articles, books, theses, abstracts, patents and sifts through web results, from publishers, universities and professional organizations.

**4. International Standard Serial Number**

An **International Standard Serial Number (ISSN)** is a unique eight-digit number used to identify a print or electronic periodical publication. Periodicals published in both print and electronic form may have two ISSNs, a **print ISSN (p-ISSN)** and an **electronic ISSN (e-ISSN or eISSN)**. The ISSN system was first drafted as an ISO international standard in 1971 and published as ISO 3297 in 1975. The ISO subcommittee is responsible for the standard.

**Code format**

The format of the ISSN is an eight-digit number, divided by a hyphen into two four-digit numbers. The last digit, which may be 0–9 or an X, is a check digit. The ISSN of the journal *Hearing Research*, for example, is 0378-5955, the check digit is 5.

**Code assignment**

ISSN codes are assigned by a network of ISSN National Centres, usually located at national libraries and coordinated by the ISSN International Centre based in Paris. The International Centre is an intergovernmental organization created in 1974 through an agreement between UNESCO and the French government. The International Centre maintains a database of all ISSNs assigned worldwide, the ISSN Register.

**Availability**

The ISSN Register is not freely available for interrogation on the web but is available by subscription. There are several routes to the identification and verification of ISSN codes for the general public.

- the print version of a periodical typically will include the ISSN code as part of the publication information
- most periodical websites contain ISSN code information
- derivative lists of publications will often contain ISSN codes; these can be found through on-line searches with the ISSN code itself or periodical title.

**5. Peer Review**

**Peer review** is the evaluation of work by one or more people of similar competence to the producers of the work (peers). It constitutes a form of self-regulation by qualified members of a profession within the relevant field. Peer review methods are employed to maintain standards of quality, improve performance, and provide credibility. In academia peer review is often used to determine an academic paper's suitability for publication.

**Professional peer review**

Professional peer review focuses on the performance of professionals, with a view of improving quality, upholding standards, or providing certification. Professional peer review activity is widespread in the field of health care, where it is best termed as **Clinical peer review**.

## Scholarly peer review

Scholarly peer review (also known as **refereeing**) is the process of subjecting an author's scholarly work, research, or ideas to the scrutiny of others who are experts in the same field, before a paper describing this work is published in a journal. The work may be accepted, considered acceptable with revisions, or rejected. Peer review requires a community of experts in a given (and often narrowly defined) field, who are qualified and able to perform impartial review

### 6. Web of Science

Single research destination to explore the citation universe across subjects and around the world. Web of Science provides access to the most reliable, integrated, multidisciplinary research connected through linked content citation metrics from multiple sources within a single interface. Since Web of Science adheres to a strict evaluation process, one can be assured only the most influential, relevant, and credible information is included - allowing to uncover next big idea faster.

### 7. Science Citation Index

- The Science Citation Index (SCI) is a citation index originally produced by the Institute for Scientific Information (ISI) and created by Eugene Garfield and was officially launched in 1964. The larger version (Science Citation Index Expanded) covers more than 8,500 notable and significant journals, across 150 disciplines, from 1900 to the present. These are alternatively described as the world's leading journals of Science and Technology, because of a rigorous selection process.
- The index is made available online through different platforms, such as the Web of Science and SciSearch.

### 8. International Standard Book Number

The **International Standard Book Number (ISBN)** is a unique numeric commercial book identifier based upon the 9-digit **Standard Book Numbering (SBN)** code created by Gordon Foster, Emeritus Professor of Statistics at Trinity College, Dublin, for the booksellers and stationers. The 10-digit ISBN format was developed by the International Organization for Standardization (ISO) and was published in 1970 as International Standard ISO. ISO has appointed the International ISBN Agency as the registration authority for ISBN worldwide and the ISBN Standard is developed under the control of ISO Technical Committee.

#### ISBN issuance

International Standard Book Numbers issuance is country-specific, in that ISBNs are issued by the ISBN Registration Agency that is responsible for that country or territory. The ranges of ISBNs assigned to any particular country are based on the publishing profile of the country concerned.

**DEPARTMENT OF COMMERCE**  
**FACULTY OF ARTS SCIENCE COMMERCE AND MANAGEMENT**  
**Ph.D. in Commerce**  
**(2024-2025 Batch onwards)**

Course code	Name of the course	Instruction hours / week			Credits	Exam Duration	Maximum Marks	Page No.
		L	T	P				
24RCOM101	<b>Paper I</b> – Research Methodology and Pedagogy	4	-	-	4	3	100	1
24RCOM 201	<b>Paper – II</b> – Research and Publication Ethics	4	-	-	4	3	100	3
24RCOM301	<b>Paper III – Special Paper I</b> – Financial Management	4	-	-	4	3	100	5
24RCOM302	<b>Paper III- Special Paper II</b> – Marketing Management							7
24RCOM303	<b>Paper III – Special Paper III</b> – Human Resource Management							9
<b>Total</b>		<b>12</b>			<b>12</b>		<b>300</b>	

**COURSE OBJECTIVES:****To make the students**

1. To gain knowledge on sampling and measurement
2. To understand methods of data collection and data processing
3. To apply appropriate statistical tools for analysis
4. To draft and prepare research reports
5. To understand various methods of teaching

**COURSE OUTCOMES:****Learners should be able to**

1. Gain knowledge on sampling and measurement
2. Understand methods of data collection and data processing
3. Apply appropriate statistical tools for analysis
4. Draft and prepare the research reports
5. Understand various methods of teaching

**UNIT I**

**Research** - Scope and Significance - Types of Research – Research Process - Characteristics of Good Research - Identifying Research problem – Sampling Design – meaning – Steps in sampling-criteria for good sample design – Types of Sample Design-Probability and non-probability sampling methods. Measurement-Meaning – types of scales.

**UNIT II**

**Review of Literature** – Data Collection-Types of Data-Sources –Methods of Data Collection- Observation, Interview Schedule, and Questionnaire – Steps for Constructing a Questionnaire-Establishing, reliability and validity-data processing-Coding-editing and tabulation of data.

### UNIT III

**Mean, Median and Mode-Parametric Test-Hypothesis testing-Z-test, t-test, F-test, Chi-square test-ANOVA-Correlation, Multiple Regression, Factor Analysis, Non-Parametric tests-Basic of Psychometric Test: Sign test, H test, U test and Run test.**

### UNIT IV

**Report Writing:** Meaning, Techniques and Precautions of Interpretation - Significance of Report Writing - Difference Steps in Writing Report - Layout of Research Report - Types: Technical Report, Popular Report - Mechanics of Writing a Research Report - Precautions for writing report-Norms for using Tables, Charts and diagram. Appendix:- Index, Bibliography.

### UNIT V

**Objectives and roll of higher education** – Important characteristics of an effective Lecture – Quality teaching and learning – Lecturer preparation –Characteristics of instructional design – Methods of teaching and learning; Large group – Technique – Lecturer, Seminar, Symposium, Team Teaching, Project, Small group Technique – Simulation, role playing Demonstration, Brain storing, Case discussion and assignment, Methods of evaluation – Self evaluation, student evaluation, Diagnostic testing and remedial teaching – Question banking – Electronic media in education – „e“ learning researches – web based learning.

### SUGGESTED READINGS:

1. Donald R.Cooper (2000), Business Research Methods, Tata Mc Graw Hill, New Delhi
2. Gupta S.P. (2000), Statistical Methods, Sultan Chand and Sons, New Delhi
3. Kothari, C.R (2002), Research Methodology, Wishwa Prakasam, New Delhi
4. Krishnaswami, (2003), Methodology of Research in Social Sciences, Himalaya Publishing House, New Delhi
5. Pannerselvam, R. (2004), Research Methodology, Prentice Hall of India, New Delhi
6. Sterling (2003), Research Methods for Management and Commerce, Tata MC Graw Hill, New Delhi
7. Vedanayagam, E.G (1989) Teaching Technology for College Teachers, Sterling Publishers(P) Ltd., New Delhi
8. Rajasekar S (2005), Computer Education and Educational computing, Neelkamal Publications, Hyderabad,
9. Kumar K.L (1997), Educational Technologies, New Age International, New Delhi
10. Kanthi Swarup P.K Gupta, Man Mohan (2019), “Operations Research”, Sultan Chand and Sons, New Delhi.



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<b>24RCOM201</b>	<b>Paper II: Research and Publication Ethics</b>	<b>4H – 4C</b>
Instruction Hours / week:	L: 4 T: 0 P: 0	Marks External:100 Total: 100

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End Semester Exam: 3 Hours

**COURSE OBJECTIVES:****To make the students**

1. To understand the concept of philosophy and ethics
2. To follow scientific conduct and research integrity
3. To gain knowledge on publication ethics
4. To apply software tools on research
5. To use Integrated Library Management System

**COURSE OUTCOMES:****Learners should be able to**

1. Understand the concept of philosophy and ethics
2. Follow scientific conduct and research integrity
3. Gain knowledge on publication ethics
4. Apply software tools on research
5. Use Integrated Library Management System

**UNIT I**

**Philosophy and Ethics:** Introduction to Philosophy: Definition – Nature and Scope – Concept – Branches – **Ethics:** Definition – Moral Philosophy – Nature of Moral Judgements and Reactions.

**UNIT II**

**Scientific Conduct** – Ethics with respect to Science and Research – Intellectual Honesty and Research Integrity – Scientific Misconduct: Falsification – Fabrication and Plagiarism (FFP) – **Redundant Publications:** Duplicate and Overlapping Publications – Salami Slicing – Selective reporting and misrepresentation of date.

**UNIT III**

**Publication Ethics:** Definition – Introduction and Importance – Best Practices / Standards setting initiatives and guidelines: COPE – WAME – etc., - Conflicts of Interest – Publication Misconduct: Definition – Concept – Problems that lead to Unethical behavior and vice versa – Type – Violation of Publication Ethics – Authorship and Contributorship – Identification of Publication Misconduct – Complaints and Appeals – Predatory Publishers and Journals.

## UNIT IV

**Publication Misconduct: Group Discussions:** Subject specific ethical issues – FFP – Authorship – Conflicts of Interest – Complaints and Appeals: Examples and fraud from India and Abroad.

**Software Tools:** Use of Plagiarism software tools like Turnitin, Urkund and other open source software tools.

**Database:** Indexing Database – Citation database – Web of Science – Scopus etc.

**Research Metrics:** Impact factor of journals as per Journal Citation Report – SNIP – SJR – IIP – Cite Score – Metrics: h-index – g index – i10 index – altmetrics.

## UNIT V

**Integrated Library Management System (ILMS):** e-journals – e books – e shodhsindu – shodhganga – Database – e content development – Learning Management System (LMS) – e PG Pathshala – CEC (UG) Swayam – MOOCs – NPTEL – NMEICT.

**IPR:** Patent – Copyrights – Trademark – Geographical Indication.

## PRACTICE:

**Open Access Publishing** – Open Access Publications and Initiatives – SHERPA / RoMEO Online resource to check publisher copyright and self-archiving policies – Software tools to identify predatory publications developed by SPPU – Journal finder / journal suggestion tools viz. JANE, Elsevier Journal Finder – Springer Journal Suggester, etc.

## SUGGESTED READINGS:

1. Santhosh Kumar Yadav (2020). Research and Publications Ethics. Ane Books, Chennai
2. Sumata Dutta (2021). Research Publication Ethics in Social Science. Bharti Publications, New Delhi

**COURSE OBJECTIVES:****To make the students**

1. To estimate present and future value of money
2. To compute cost of capital and capital budgeting techniques
3. To construct optimum capital structure
4. To estimate rate of dividend and working capital
5. To calculate cash, inventory and receivable management

**COURSE OUTCOMES:****Learners should be able to**

1. Estimate present and future value of money
2. Compute cost of capital and capital budgeting techniques
3. Construct optimum capital structure
4. Estimate rate of dividend and working capital
5. Calculate cash, inventory and receivable management

**UNIT I**

**Financial Management** – Meaning - Nature and Scope - Objectives – Role and Functions of Financial Manager- Time value of money – Present Value, Future Value and Compound analysis- Identification of research problems.

**UNIT II**

**Cost of Capital**- Meaning and importance- Cost of debt, Preference Share, Equity Share and Retained Earnings- Weighted Average cost of capital- Capital Budgeting- Techniques – Pay back period, Net Present Value, Return on Investment and Internal Rate of Return- Identification of research problems.

**UNIT III**

**Leverage:** Meaning – Financial Leverage - Operating Leverage - EBIT- EPS analysis- Capital structure – Theories of Capital Structure – Net Income Approach – Net Operating Income Approach - MM Hypothesis – Traditional Approach – Determinants of capital structure – Optimum Capital Structure- Identification of research problems.

## UNIT IV

**Dividend Theories** – Walter's model – Gordon and Mm's models – Dividend policy – forms of Dividend – Determinants of dividend policy. Working capital Management – Meaning – Objectives – Importance – Computation of working capital - Determinants of working capital- Identification of research problems.

## UNIT V

**Management of Working Capital Components** – Cash management – Inventory management - Receivables management. Reports of Various Working capital committees.

**Note:** The question paper shall cover 50 % theory and 50% problems

### SUGGESTED READINGS:

1. Khan and Jain (2006). Financial Management. Tata Mc Graw Hill Publishers Pvt. Ltd., New Delhi.
2. Pandey I.M (2006). Financial Management. Vikas Publications, New Delhi.
3. Kulkarni P.V (2003). Financial Management. Himalaya Publishing house, Mumbai.
4. Maheswari S.N (2005). Financial Management. Sultan Chand and Sons, New Delhi
5. Sharma Sasi K Gupta (2003). Financial Management. Himalaya Publishing house, Mumbai.

**COURSE OBJECTIVES:****To make the students**

1. To understand the core marketing concepts
2. To gain knowledge on ways on market segmentation
3. To understand the concept of marketing research and its ethics
4. To formulate plan for marketing goods in rural areas
5. To design strategy for global marketing

**COURSE OUTCOMES:****Learners should be able to**

1. Understand the core marketing concepts
2. Gain knowledge on ways on market segmentation
3. Understand the concept of marketing research and its ethics
4. Formulate plan for marketing goods in rural areas
5. Design strategy for global marketing

**UNIT I**

**Marketing Management-** Introduction, Importance- Core Marketing concepts, Product planning and development – Product policy decisions – Product Line and Product Mix – Product Life Cycle – Brand Management. Pricing system – Procedure for Price Determination – Advertisement and Sales promotion- Identification of research areas.

**UNIT II**

**Market Segmentation-** need for segmentation, benefits of segmentation- base for segmentation – segmenting consumer markets and business markets. Consumer behavior, types of buyer behavior- buying decision of organizational buyers-organizational buying process- Identification of research areas.

**UNIT III**

**Marketing Research-** Introduction, Objectives and Importance, Scope of Marketing Research, Marketing Research Process, Applications of Marketing Research- Limitations of Marketing Research – Marketing Information System - Ethics in Marketing Research- Identification of research areas.

## **UNIT IV**

**Indian Marketing** Environment- Emerging profile of the Indian market, changing the demographic structure-Opportunities in Rural Markets – Rural buying behaviour-Marketing and Society- Social responsibility and Marketing Ethics - Experiences marketing in India - Identification of research areas.

## **UNIT V**

**Global Marketing-** Introduction, Importance of Global Marketing- The role of Orientations, The forces affecting Global Marketing- Global Marketing Strategy. E-marketing – Introduction, role of the internet, Types of E-Markets, Marketing mix in E-Marketing, Advantages and Limitations of E-marketing- - Identification of research areas.

### **SUGGESTED READINGS:**

1. Karunakaran.Dr (2007). Marketing Management. Himalaya Publishing House, Mumbai.
2. Philip Kotler and Gary Armstrong (2007). Principles of Marketing. Prentice Hall of India Pvt. Ltd., New Delhi.
3. Rajan Nair (2006). Marketing Management. Sultan Chand and Sons, New Delhi.
4. Mamoria C.B and SatishMamoria (2006). Marketing Management. KitabMahal, Patna.
5. Naresh K. Malhotra (2002). Marketing Research. Pearson Education, New Delhi.
6. Varshney R.L and Bhattacharya.B (2006) International Marketing Management. Sultan Chand& Sons, New Delhi.
7. Nandagopal and Vivek (2006).Marketing Research. Asian Publications, New Delhi.

**COURSE OBJECTIVES:****To make the students**

1. To gain knowledge on Job design, job analysis and Job specification
2. To understand various techniques on recruitment
3. To evaluate performance of employees
4. To determine the method of job evaluation and salary administration
5. To understand concept of collective bargaining and participative management

**COURSE OUTCOMES:****Learners should be able to**

1. Gain knowledge on Job design, job analysis and Job specification
2. Understand various techniques on recruitment
3. Evaluate performance of employees
4. Determine the method of job evaluation and salary administration
5. Understand concept of collective bargaining and participative management

**UNIT I**

**Human Resource Management** – Meaning – Significance- Functions –Strategy and tactics-Evolution and Development of HRM- Job design-Job Analysis –Job description – Job specification- Identification of research areas.

**UNIT II**

**Recruitment**-Definitions-Objectives, Corporate Mission-Objectives-strategies, tactics and recruitment-Sources and Techniques of recruitment – E-recruitment. Selection, Placement and Induction- Human Resource Development: Conceptual Analysis - Identification of research areas.

**UNIT III**

**Performance Appraisal**-Methods-System- Counseling – Managerial appraisal. Employee training – Training methods- Training procedure- Evaluation of training Programme – career planning and development-Identification of research areas.

## **UNIT IV**

**Internal Mobility and External Mobility**-Organizational change and development- Job Evaluation – Wage and salary administration- Fringe Benefits-Human Relations- Identification of research areas.

## **UNIT V**

**Globalization and Human Resource Management**- Introduction- Impact on employment , Human Resource Development, Wages and Benefits, Trade Unions, Collective Bargaining, Participative Management and Quality Circles. Total Quality and Human Resource Management- Identification of research areas.

### **SUGGESTED READINGS:**

1. Gupta C.B (2007). Human Resource Management. Sultan Chand and Sons, New Delhi
2. Prasad L.M (2000). Human Resource Management. Sultan Chand and Sons, New Delhi.
3. Memoria C.P (2004). Personnel Management. Sultan Chand and Sons, New Delhi
4. SubbaRao (2006). Essentials of HRM and Industrial Relation. Himalaya Publishing House, Mumbai.
5. Tripathi P.C (2000). Personnel Management. Sultan Chand and Sons, New Delhi.