# **JIIT NOIDA**

# Ph. D. ORDINANCES, RULES, REGULATIONS AND PROCEDURES

# Revised : Sep 2024

### PREAMBLE

Jaypee Institute of Information Technology (Deemed University) offers programs leading to the award of the Degree of Doctor of Philosophy, (PhD). The award of PhD degree is in recognition of high academic achievements, independent research and application of knowledge to the solution of technical and scientific problems in science, technology, humanities & social sciences and management; creative and productive inquiry is the basic requirement underlying the research work.

The academic program leading to the PhD degree is broad-based and involves course credit requirements.

The Degree of Doctor of Philosophy (PhD) of the Jaypee Institute of Information Technology (Deemed to be University) shall be conferred on a candidate who fulfils all the requirements specified in these Ordinances and Regulations.

### 1. CRITERIA AND PROCEDURE FOR ADMISSION TO PhD PROGRAM<sup>1</sup>

### **1.1. Minimum Qualifications:**

- (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 in respective discipline with 60% Aggregate marks or CGPA not less than 6 on scale of 10.
- (b) 4-year/8-semester bachelor's degree programme with 75% Aggregate marks or equivalent CGPA.
- (c) Consistently good academic record / performance.

### 1.2. Admission

### (A) Admission will be based on;

- (a) Satisfying the requirements of minimum qualifications as laid down in 1.1.
- (b) Performance in Interview for those who have qualified in SLET /UGC /CSIR (JRF) or equivalent national level examinations for research fellowship.
- (c) Performance in The PhD Entrance Test (at least 50% marks) and interview to be conducted by JIIT, Noida for all those who are not qualified in any of the examinations mentioned in 1.2.(ii).

#### (B) Following are related to the admission process;

- (a) Candidates are required to discuss their research interests and proposed research work at the time of Interview.
- (b) Number of Scholars to be admitted shall be at the discretion of the JIIT, based on the availability of the resources and academic profile of the candidates.
- (c) Due consideration will be given to the National Reservation Policy.
- (d) Faculty members from JIIT may be permitted to register directly after due scrutiny of the candidature by the Dean (A&R) and after approval of the VC.
- (e) The students admitted to the PhD Program will be required to register themselves for the specific Program. The registration will be renewed every semester, on satisfactory progress.
- (f) The enrollment / admission shall be done only in the beginning of a semester.
- (C) Classifications
  - (a) The applicant for admission to the Ph.D. program shall be classified under the following categories which shall be decided by the Doctoral Program Monitoring and Advisory Committee (DPMAC)

<sup>&</sup>lt;sup>1</sup> AC Meeting dated 04 April 2024

- (b) Full-time Research Scholar Such scholars shall be working full time in the institute and also may be in receipt of the Research Fellowship awarded by the university or an outside agency like DST/DBT/CSIR etc.
- (c) Part-time Research Scholar They may include institute faculty/staff, project staff like JRF etc. who are on rolls of the institute and working under the project supervisors for various sponsored projects. Further, scholars who may be working elsewhere and not in JIIT and willing to meet the Ph.D. program progression requirements like residential requirement / course work as laid down by the university may be enrolled as a part time research scholar (in the school/ departments which may offer part time programs) subject to production of a No Objection Certificate from their organization and facilities for carrying research work in their organization exist to the satisfaction of DPMAC. Such scholars shall not be awarded any research fellowship/ assistantship by the university.
- (d) Sponsored Research Scholar Scholars who are working in the industry / institutions and who are enrolled for the Ph.D. program after being spared/sponsored by their parent organization for doing the Ph.D. work shall come under the sponsored category. Such candidates will have to provide the required undertaking from their sponsoring organization. (proforma as per <u>Annexure-1</u> attached). Such scholars shall not be awarded any research fellowship/Assistantship by the institute.

# 2. ENROLLMENT AND REGISTRATION PROCESS

As per Annexure-2 attached.

# 3. PhD THESIS SUPERVISOR(S), THEIR ELIGIBILITY CRITERIA AND ALLOCATION

- 3.1 For every PhD student, a PhD supervisor will be appointed by the VC on the recommendations of Dean (A&R) and the concerned HOD who will keep in mind the available specializations of the supervising faculty members and research interest of the student while recommending the Supervisor(s).
- 3.2 There will be a DPMAC for each Research Scholar which will be constituted by Dean (A&R) in consultation with HoD and supervisor(s). The DPMAC will consist of<sup>2</sup>:
  - (a) Dean(A&R)-I /Dean(A&R)-II /Nominee of Dean (A&R) I or II Chairman
  - (b) Head of the Department
  - (c) One expert in the field from the department
  - (d) One expert from outside the Department
  - (e) Respective Supervisor(s)
- 3.3 Regular faculty having PhD qualifications and at-least 5 publications in case of Professors and 2 publications in case of other cadres shall be eligible to be appointed as Supervisor. The publications referred to above should be in Journals referred and indexed in Scopus/Web of Science/SCI/Indian Citation Index.
- 3.4 The Dean (A&R) may recommend a second supervisor, considering the nature and contingencies of the research topic, from within or outside JIIT, who should fulfill the same condition of having Ph.D. etc. as the main Supervisor.
- 3.5 At any given point of time, no supervisor will have more than the following number of Ph.D. students under his/her supervision:
  - (a) Professors 8 students
  - (b) Associate Professors 6 students
  - (c) Assistant Professors 4 students

No faculty of JIIT shall undertake guidance of Ph.D. candidates outside JIIT without express permission of Vice-Chancellor

- 3.6 In exceptional cases where the research topic is of interdisciplinary nature, Dean (A&R) may recommend a third supervisor.
- 3.7 In case a supervisor moves out of JIIT before submission of Thesis by the candidate then a new supervisor is to be recommended by Dean (A&R) and HOD concerned. However, original supervisor who has supervised the scholar for at least one year may continue as Co-supervisor, subject to approval of the VC. In case a supervisor proceeds on long leave i.e. more than six months, then (s)he shall cease to continue as supervisor

<sup>&</sup>lt;sup>2</sup> AC Meeting dated 26 Aug 2023

provided (s)he has supervised the candidate for less than one year and/ or has moved out of India. In all such cases a new supervisor will be appointed as per clause 3.1. In case supervisor has proceeded on long leave, supervised the candidate for at least one year and is located in India then (s)he may continue as co supervisor subject to the limit that in no case number of supervisors for a scholar shall exceed three.

- 3.8 In case a supervisor(s) is/are not available due to any reason and the Ph.D. Thesis has been submitted, the VC on recommendations of the Dean (A&R) and HOD of the School/Department will appoint an administrative supervisor to take care of the process of evaluation of the thesis.
- 3.9 In case of relocation of a woman Ph.D. Scholar due to marriage or otherwise the research scholar shall be allowed to be transferred to the university to which the scholar intends to relocate provided the research work does not pertain to research project secured by JIIT/Supervisor from any funding agency. However, in all such cases, the scholar will give due credit to her supervisors at JIIT and JIIT for the part of research done at JIIT.

# 4. COURSE WORK AND ATTENDANCE REQUIREMENT<sup>3</sup>

4.1 Every student admitted to the PhD Program will have to earn specified in the table below: -

S. No.	Entry Qualifications	Min. Course Work Credits Required (including core courses)
1.	M Tech-Engg/Technology, M Pharm, MBA	12
2.	Master's Degree in Sciences / Humanities / Social Sciences/ M.C.A.	15
3.	B Tech	21

- 4.2 Course work is to be successfully completed within first two semesters by scholars except for B. Tech wherein course work is to be completed within three semesters after registration.
- 4.3 The Research Scholar must obtain a minimum of 'B' Grade in every registered course for successfully earning the credits allotted to the course.
- 4.4 Courses/subjects to be undertaken

# (A) Core Courses: Every research scholar will take the following courses:

- (a) Research Methodologies including Quantitative Methods 3 Credits (could be different for different departments).
- (b) Literature Survey and Seminar- 3 credits.
- (c) Research and Publication Ethics (with PBL component)– 3 credits.

# (B) Additional Courses/Subjects

All other courses / subjects to fulfill the credit requirement shall be at advanced level and relevant to proposed PhD research work of the candidate and shall be as specified by DPMAC in each case, these may add up credits to a value higher than the minimum required as per the academic needs of the scholar.

# 4.5 Attendance requirement during the course work.

It is essential for all scholars to comply with the policy of attendance of the university during the course work.

# 4.6 Semester Withdrawal due to Medical / Other Reasons

A scholar may seek semester withdrawal on the basis of medical advice after due approval of the Vice Chancellor through the Dean and Head of the Deptt. after submitting the authentic medical record. Further the scholar may be allowed to take a semester withdrawal for any other genuine reason but after approval of the Vice Chancellor based on the recommendations of the DPMAC and Dean (A&R).

The semester withdrawal will count towards the maximum limit for submission of Ph.D. thesis as specified in the rules.

4.7 Any scholar who deregisters from PhD and re-joins the Program Within 5 years may be allowed to avail the course work already done for PhD. However, he/she must have secured B plus grade in all those subjects.

<sup>&</sup>lt;sup>3</sup> AC Meeting dated 04 April 2024

# 5. RESIDENTIAL AND OTHER REQUIREMENTS

# 5.1 Residential Requirement

- (a) The residential requirement is to ensure the attendance of a scholar for completion of the course work and also ensuring frequent interaction with the supervisor in the initial phase of the program to assist in finalizing the area / topic of research and thereafter for constant mentoring of the research work by the Ph.D. supervisor.
- (b) The registered PhD students should therefore, preferably work full time through out the tenure of their PhD Program.
- (c) The residential requirement for sponsored and part-time candidates means ensuring full attendance and constant interaction with the supervisor. However, in special cases of Sponsored and Part Time students from Academic/Research Organization/Reputed Industry, the residential requirement may be relaxed up to a reasonable extent on completion of the course work. They may be permitted to return to the parent Organization and continue his/her PhD work there provided;
- (d) He/she is able to get a qualified Co-supervisor in his/her organization and
- (e) The organization has necessary facilities and permitted the candidate to carry out PhD research Work.
- (f) However, above conditions (a) and (b) may be relaxed if the parent organization is located within 100 km distance from JIIT. Such candidates will have to be in constant touch with the supervisor at JIIT. It is desirable that the scholars spend at least two weeks every semester in JIIT and interact with the supervisor in addition to interaction as may be required and desired by the supervisor.
- (g) There will be no residential requirement for candidates serving in any institution of Jaypee Education System (JES).
- 5.2 All scholars allowed to work part-time / sponsored will have to report for every semester seminar and for all performance evaluation requirements in order to renew their registration.
- 5.3 The requirement of the Co-supervisor from the industry / research organization having PhD Degree, may be relaxed, provided, he/she has long R & D experience and the same is established by experience / publication/ other relevant records of the external supervisor.

# 6. DURATION

6.1 Minimum and maximum duration to qualify for the award of the PhD Degree

0	Minimum Duration	Maximum Duration
For Full Time Candidates	Three years	Six years
For Part Time Candidates	Th <mark>ree yea</mark> rs	Six years

The maximum period will count from the date of enrolment to the date of submission of the Ph.D. thesis.

- 6.2 In exceptional circumstances, to the satisfaction of the Vice-Chancellor, (a) candidate (specially women or disabled ( > 40%) Scholars) may be granted extension for a maximum of 2 years. b) a relaxation of maximum one year in the minimum duration as specified above provided (s) he/she is a full time candidate.
- 6.3 Women Ph.D. Scholars may be allowed maternity leave/child care leave, only once in the entire duration of Ph.D., for a maximum of up to 240 days. However, this leave period will not impact the maximum duration of Ph.D. programme as specified in clause 6.1 & 6.2 above
- 6.4 In case a PhD scholar is not able to successfully complete the PhD within the maximum duration as specified above (including 6.2(a) above) his/her registration will expire and the PhD program will stand automatically terminated.

# 7. APPRIASALS, ASSESSMENTS AND EVALUATION

- 7.1 An appraisal of the progress of each PhD Scholar will be carried out by DPMAC and an Expert at approximate intervals of every One and Half years. The purpose of these appraisals shall be to provide guidance for enhancing the quality of research and an independent feedback on the progress of the Scholar.
- 7.2 (a) Once the scholar has
  - (i) Completed the course work requirement successfully,
  - (ii) Completed the research Work,

(iii) Must have published at least four papers from the thesis work out of which three must be in SCI/ SCOPUS indexed reputed, referred and indexed journals preferably having Thomson Reuter/ Clarivate Analytics impact factor of ≥ 0.2. Applicable for the PhD admissions in the academic session 2019-20 onwards<sup>4</sup>.

To maintain ethical standards in research, the following norm for research publications out of PhD work will be followed:

"That the research papers published out of the thesis work having authorship of the PhD scholar and his supervisor(s) only will be included in the PhD thesis".

Above norm will be effective for the research papers submitted for publication by existing and new PhD scholars (AY 2019-20 onwards)

For scholars registered before AY 2019-20 the criteria is available at <u>https://www.jiit.ac.in/sites/default/files/PHD%200RD-Mod-Jan%202024.pdf</u>

- (b) The scholar shall apply for Work Assessment by full DPMAC in the prescribed form and on satisfactory report of work assessment
- (c) The scholar will be required to;
  - (i) submit a draft synopsis of the PhD work and
  - (ii) deliver a synopsis seminar, which will be open to all faculty members and research scholars.
- 7.3 Synopsis seminar will be evaluated by DPMAC and if found fit for submission, the same shall be recommended by DPMAC. The candidate will then be required to submit the final PhD synopsis in the specified format with all suggested modifications included, by a date given by Dean (A&R)/ DPMAC.
- 7.4 The candidate will be required to submit Ph.D. Thesis in the specified format and fulfilling other requirements including plagiarism check report from the Institute Library within the date of submission specified by Dean-A&R at the time of synopsis presentation. The format is attached as <u>Annexure-3</u>.
- 7.5 If a Ph.D. Scholar fails to submit the PhD thesis in the specified format fulfilling all the requirements within the date approved at the time of the PhD synopsis presentation, then the following procedure is to be followed
  - (a) The PhD Scholar may apply to the Dean (A&R) through the Supervisor(s) and the HoD, for grant of some more specific time for submission of the PhD Thesis.
  - (b) The Supervisor(s) may forward the application to the Dean (A&R) through the HoD either supporting the extension or rejecting it, with full justification in either case.
  - (c) The HoD would give his/her own comments and send the application to the Dean (A&R).
  - (d) After giving full consideration and examining the progress of the PhD scholar from the date of registration, the Dean (A&R) would give recommendation to the VC for final decision and approval. In any case, the extension for submission of the PhD Thesis can not be more than a month from the earlier given date for submission.
  - (e) The VC will give his final decision and approval.
- 7.6 In case, a PhD scholar fails to submit the PhD thesis even within the granted extended period, his/her PhD synopsis and the seminar shall be treated as cancelled. He/she has to start the process of submitting fresh PhD synopsis and giving a fresh PhD synopsis seminar following the normal procedure. No second extension will be granted.
- 7.7 Both the points (7.5) and (7.6) above are applicable only within the valid period of the PhD Registration as per Clause 6. In case it spills beyond valid PhD registration period, the PhD Registration will stand automatically terminated. After termination the process of renewal of the PhD registration has to be followed, if the PhD scholar so desires.

# 7.8 Nomination of Panels of Examiners:

- (a) Two panels of examiners each consisting of five experts having long experience and good standing in the relevant field of the PhD work, will be proposed by the DPMAC in consultation with the supervisor(s) to the Dean (A&R) who on accepting the same shall get it approved by the Vice-Chancellor.
- (b) The first panel will have experts from within India geographically spread over the entire country and the second panel will have experts from out side India spread over different continents.

<sup>&</sup>lt;sup>4</sup> AC Meeting dated 05 Aug 2019

- (c) The Vice-Chancellor will finalize the examiners, one from each panel, to whom the thesis will be sent for evaluation after obtaining their consent.
- (d) The approved Examiners will be approached, along with copy of the synopsis seeking their consent.

# 7.9 Evaluation Report

- (a) The external examiners are supposed to give their evaluation reports with their recommendations in a prescribed format, Annexure-4, within ten weeks of the receipt of the thesis.
- (b) If the report(s) of the external examiner(s) are not received within the specified period of 10 weeks, the Controller of Examinations/Registrar may send a reminder to the concerned examiner(s) to expedite the reports positively within two weeks of the receipt of the reminder.
- (c) In any case, if the report(s) are not received even by the extended period, the Controller of Examinations/Registrar would put up a note to the VC to this effect, who may approve the name(s) of other examiner(s) from the appropriate category of the panels.
- (d) The Controller of Examinations/Registrar would send the thesis to the new examiner(s) following usual procedure.
- (e) This process can continue till the particular category of panel is exhausted. However, the VC may like to terminate the panel(s) at any point of time.
- (f) In case, the panel(s) gets exhausted or is terminated by the VC, the VC may seek fresh panel(s) from the DPMAC through Dean (A&R). The Controller of Examinations/Registrar would send the thesis for examination to the examiner(s) as approved by the VC from the appropriate new panel(s).
- (g) If both the panel(s) in each category either get exhausted or are terminated by the VC, the VC may decide the next course of action in consultation with the Dean(A&R).
- (h) The External Indian Examiner will be the examiner for the Viva-Voce Examination (Open Defense).
- (i) The Recommendations and the evaluation reports from all the examiners will be placed before the Vice-Chancellor for further action.
- (j) If the Vice-Chancellor finds the recommendations and the evaluation Reports from the examiners satisfactory, the date of final Viva-Voce examination will be decided in consultation with the External Indian Viva-Voce Examiner.
- (k) In case, the report(s) and recommendations of one external examiner(s) is not favorable, the thesis would be sent to another examiner, from the respective panel, to be decided by the Vice-Chancellor, for evaluation.
- (I) However, if the report(s) and the recommendations from both the external examiners are not favorable, then the PhD Thesis will be rejected and the PhD degree will not be awarded.

# 7.10 **Re-Registration in case of rejection of thesis:**

- (a) The candidate may, however, be allowed to renew his/her registration to continue the PhD work on the same topic and under the same supervisor(s) for another minimum period of one year. A fresh Thesis has to be submitted by the candidate within two years but not earlier than one year of renewal. The normal process of the evaluation will be followed afresh
- (b) If a PhD scholar, who has been allowed to renew registration to continue for PhD degree after his/her thesis was rejected, fails to submit the fresh thesis within two Years as specified above, his/her PhD renewal of registration will be totally terminated once for all.
- (c) The registration of a PhD scholar expires
  - (i) on completion of the allowed maximum period of registration even after granted extension, or
  - (ii) on the final rejection of the thesis, even after submission/re-submission of the PhD thesis. No second renewal of registration is permitted.

# 7.11 Open Defense

- (a) Once the thesis is accepted, the candidate will be required to defend his/her PhD work and the thesis in an open Viva-Voce Examination(s). He/She has to answer satisfactorily the queries of the examiners at the time of the Viva-Voce Examination where the DPMAC members shall also be present.
- (b) On completion of the final PhD Viva-Voce-Examination, the examiners will give their report in the prescribed format. The candidate will be required to submit the final version of the thesis in the required format, incorporating all the suggestions of the Viva-Voce Board, both in hard as well as soft forms within the time limit specified by Dean (A&R). The incorporation of the required changes will be certified by supervisor(s) and verified by Dean (A&R).

- (c) On receipt of the final version of thesis, Registrar will present the same along with reports of all examiners to the Dean (A&R) who in turn will forward the same along with his observations, if any, to the Vice Chancellor who shall finally decide on award of Ph D degree to the candidate or otherwise. A Provisional Certificate would be issued to the candidate, if applicable.
- (d) The final degree will be awarded in the Convocation.

### 8. RE-REGISTRATION FOR PHD DEGREE

- 8.1 On the final expiry of the registration, even after renewal, due to expiry of the period as above or final rejection of the thesis as above, the registration will be terminated.
- 8.2 However, if the PhD Scholar desires and gives proper justification, may be allowed to re-register for PhD afresh. The re-registration will require the PhD scholar to take up a new current topic with new and / or earlier supervisor(s). The maximum period for the re-registration will be three years including all extensions and the minimum for submission of the new PhD Thesis is two years. Following the normal procedures and the PhD regulations, the PhD Scholar must submit the new thesis within three years, but not earlier than two years of re-registration, failing which, the re-registration will be terminated and he/she will not be allowed for any further registration.
- 8.3 The evaluation process for the thesis submitted under re-registration will be the same as for the new registration.

### 9. PREMATURE CANCELLATION OF REGISTRATION

- 9.1 The PhD registration will be cancelled in any one of the following eventualities by the competent authority:
  - (a) If he/she absents himself/herself for a continuous period of four weeks without prior intimation/ sanction of leave.
  - (b) If he/she resigns from the Ph.D. Program.
  - (c) If he/she fails to renew the registration in any semester.
  - (d) If progress of a research scholar is unsatisfactory, the DPMAC shall record reasons for the same and suggest corrective measures. If the scholar fails to implement these corrective measures, the DPMAC may recommend cancellation of registration recording specific reasons for the same. However, based on the cumulative reports of DPMAC/ Supervisor(s), the Vice-chancellor on the recommendations of the Dean-(A&R) may cancel the registration of the Scholar.
  - (e) If he/she is found involved in an act of misconduct and / or indiscipline.
- 9.2 If the PhD registration is cancelled on any of the above accounts, re-registration is not permitted at all.

### 10. RULES REGARDING AWARD OF RESEARCH FELLOWSHIP

Attached as Annexure-5

#### **11. LEAVE AND ATTENDANCE**

- (a) A scholar will be entitled to leaves as per leave rules formulated by the Institute and amended from time to time. A full time scholar is entitled to 30 days of leave including leave on medical grounds per academic year. He/she shall not be entitled to mid-semester breaks, summer and winter vacations etc. The leave per semester shall be restricted to 15 and this shall not be carried forward to the next semester.
- (b) The leave beyond 30 days will be without research fellowship.
- (c) Such an extension of leave shall be granted under exceptional circumstances by the Dean (A&R) and only once during the program of the scholar.

# **12. DEPOSITORY WITH UGC**

Following the successful completion of evaluation process and the announcement of the award of the PhD degree, a soft copy of the PhD thesis will be sent to the UGC within a period of thirty days.

### 13. GENERAL

In case a scholar is found adopting or suspected of adopting unfair means before, during and after the examination or lifting of some other's work(s) and inserting it in his/her project, seminar and dissertation etc. without proper acknowledgement, credit and reference or plagiarizing the dissertation/project report etc., such

penal action shall be taken by the institute as may be necessary to up hold the sanctity and integrity of the examination system and the creditability of the institute.

Notwithstanding anything contained in these Ordinances & Regulations, all the PhD scholars will be governed by the rules and procedures framed by the Institute in this behalf, and on matters of general discipline and in force from time to time. The decision of the Vice Chancellor in all matters related to Ph D shall be final and binding on all parties.

- **14. REGISTRATION:** All PhD scholars are required to register in each semester as per the schedule given in the academic calendar till the final thesis (hard bound thesis) is deposited
  - (a) New PhD Admission: Registration will be done as per schedule communicated in admission offer letter.
  - (b) Existing PhD scholars: Existing scholars will submit Form-II (Semester progress report and renewal of registration) to their supervisor and appear for end semester presentation as per Department schedule. Scholars will be informed about fee deposition by the Registrar's office after approval of Form-II. Registration will be done after deposition of fees/dues as per the dates given in the Academic Calendar.

### 15. REGISTRATION IN PHD PROGRAM DURING PARTIAL/ FULL SEMESTER BREAK<sup>5</sup>

PhD scholars seek semester break under different circumstances within the provisions available in their academic system. On completion of the break, the scholar is required to seek approval for continuing the program.

- (a) A scholar will be required to renew the registration in each semester of the PhD program within due date as per the academic calendar, even if the new semester begins during leave period of partial/ full semester break. This will be required for continuity of registration in PhD program.
- (b) For renewal of registration, scholar will seek the approval as per the usual process by filling Form-II and appear for end semester presentation.
- (c) Once approved by Vice-Chancellor, renewal of registration will be done after deposition of applicable fee as under:
  - (i) In case of partial semester break, scholar will be required to pay full admissible fee for the renewal of registration in the concerned semester.
  - (ii) In case a scholar works partly in the semester in which leave starts and partly in a semester in which leave ends, he/she will be required to pay full admissible fee for the renewal of registration in the concerned semesters.
  - (iii) The semester in which scholar remains on leave for the whole semester, he/she will be required to pay the admissible fee for continuation of registration in the PhD program in the concerned semester.
- 16. PHD Examination Fee<sup>6</sup>: Scholars are required to deposit PhD thesis Examination fee of Rs 25,000/- at the time of submission of PhD Thesis.



<sup>&</sup>lt;sup>5</sup> AC Meeting dated 28 Jun 2021

<sup>&</sup>lt;sup>6</sup> AC Meeting dated 23 Nov 2019