



## **NATIONAL INSTITUTIONAL RANKING FRAMEWORK**

**Methodology for Ranking of Academic Institutions in India**

**(RANKING METRICS FOR RESEARCH INSTITUTION)**



**Ministry of Human Resource Development**

## Summary of Ranking Parameters and Weightages- 2023

(Research Institution)

<b>Sr. No.</b>	<b>Parameter</b>	<b>Marks</b>	<b>Weightage</b>
1	Metric for Quantitative Research	100	0.30
2	Metric for Qualitative Research	100	0.30
3	Metric for Students and Faculty Contribution	100	0.20
4	Outreach and Inclusivity	100	0.10
5	Perception	100	0.10

<b>S.No.</b>	<b>Parameters</b>	<b>Marks</b>
<b>1.</b>	<b>Metric for Quantitative Research</b> <b>Ranking weight: 0.30</b>	<b>100</b>
	A. Combined metric for Publications (PU): 50 marks B. Combined metric for Citations Index (CI): 25 marks C. Footprint of Projects and Professional Practice (FPPP): 25 marks	
<b>2.</b>	<b>Metric for Qualitative Research</b> <b>Ranking weight: 0.30</b>	<b>100</b>
	A. Combined metric for publications in 1st Quartile JCR(JCRQ1): 30 marks B. Combined metric for Publications in Top 25 (TOP25): 30 marks C. IPR and Patents: Published and Granted (IPR): 20 marks D. H- Index (HI): 20 marks	
<b>3.</b>	<b>Metric for Students and Faculty Contribution</b> <b>Ranking weight: 0.20</b>	<b>100</b>
	A. Combined metric for Faculty with PhD (or equivalent) and Experience (FQE): 40 marks B. Student Strength including Doctoral Students (SS): 30 marks C. Metric for Number of Ph.D. Students Graduated (GPHD): 30 marks	
<b>4.</b>	<b>Outreach and Inclusivity (OI)</b> <b>Ranking weight: 0.10</b>	<b>100</b>
	A. Percentage of Students from other States/Countries (Region Diversity RD): 30 marks B. Percentage of Women (Women Diversity WD): 30 marks C. Percentage of SC/ST Students(SCTS): 20 marks D. Facilities for Physically Challenged Students (PCS): 20 marks	
<b>5.</b>	<b>Perception (PR)</b> <b>Ranking weight: 0.10</b>	<b>100</b>
	A. Peer Perception: Employers & Academic Peer (PR): 100 marks	

## **1. Metric for Quantitative Research : 100 marks**

- **Ranking weight: 0.30**

- **Overall Assessment Metric:**

$$\text{QNR} = \text{PU (50)} + \text{CI (25)} + \text{FPPP (25)}$$

- **Component metrics based on :**

**A. Combined metric for Publications : PU**

**B. Combined metric for Citations Index : CI**

**C. Footprint of Projects and Professional Practice : FPPP**

**A. Combined metric for Publications (PU): 50 marks**

- $PU = 50 \times f(P/F_{RQ})$
- $F_{RQ}$  is the maximum of nominal number of faculty members as calculated on the basis of a required FSR of 1:15 or the available faculty in the institution.
- **Sources: Third party sources.**

**B. Combined metric for Citations Index (CI): 25 marks**

- $CI = 25 \times f (CC/F_{RQ})$
- Here CC is Total Citation Count over previous three years.
- $F_{RQ}$  is the maximum of nominal number of faculty members as calculated on the basis of a required FSR of 1:15 or the available faculty in the institution.
- *Primary Data: Third Party Sources.*

**C. Footprint of Projects and Professional Practice (FPPP): 25 marks**

- **FPPP = FPR + FPC**
- **FPR = 18.75 × f (RF)**
- RF is average annual research funding earnings (amount actually received in rupees) per faculty at institute level in previous three years.
- **FPC = 6.25 × f (CF)**
- CF is average annual consultancy amount (amount actually received in rupees) per faculty at institute level in previous three years.

## **2. Metric for Qualitative Research (QLR): 100 marks**

- **Ranking weight: 0.30**
- **Overall Assessment Metric:**

$$\text{QLR} = \text{JCRQ1}(30) + \text{TOP 25 (30)} + \text{IPR}(20) + \text{HI (20)}$$

**The component metrics explained on following pages.**

- A. Combined metric for publications in 1st Quartile: JCRQ1**
- B. Combined metric for Publications in Top 25: TOP25**
- C. IPR and Patents: Published and Granted: IPR**
- D. H- Index: HI**



**A. Combined metric for publications in 1st Quartile JCR(JCRQ1): 30 Marks**

- $JCRQ1 = 30 \times f(JCRQ1/F_{RQ})$
- *JCRQ1 is weighted number of publications in 1<sup>st</sup> Quartile as ascertained from suitable third party sources.*
- *F<sub>RQ</sub> is the maximum of nominal number of faculty members as calculated on the basis of a required FSR of 1:15 or the available faculty in the institution.*
  
- **Sources: Third party sources.**

**B. Combined metric for Publications in Top 25 (TOP25): 30 marks**

- **TOP25 = 30 × f (TOP25P/P)**
- *P is weighted number of publications as ascertained from suitable third party sources.*
- TOP25P: Number of citations in top 25 percentile averaged over the previous three years.
- ***Primary Data: Third Party Sources.***

**C. IPR and Patents: Patents Published and Granted (IPR): 20 marks**

- **$IPR = IPG + IPP$**

**$IPG = 10 \times f(PG)$**

- PG is the number of patents granted over the previous three years.

**$IPP = 10 \times f(PP)$**

- PP: No. of patents published over the previous three years.

- *Primary Data: Third Party Sources.*

**D. H-Index:20 marks**

**H-Index=20\*HI**

*HI is weighted number of H Index as ascertained from suitable third party sources (Web of science and Scopus)*

### **3. Metric for Students and Faculty Contribution (SFC) : 100 marks**

- **Ranking weight: 0.20**
- **Overall Assessment Metric:**
- **$SFC = FQE(40) + SS(30) + GPHD(30)$**
- **The component metrics are explained on the following pages:**
  - A. Combined metric for Faculty with PhD (or equivalent) and Experience: FQE**
  - B. Student Strength including Doctoral Students: SS**
  - C. Metric for Number of Ph.D. Students Graduated: GPHD**

**A. Combined Metric for Faculty with PhD (or equivalent) and Experience (FQE): 40 marks**

- $FQ = 20 \times (F_{RA}/95)$ ,  $F_{RA} < 95\%$ ;
- $FQ = 20$ ,  $F_{RA} \geq 95\%$ .
- *Here  $F_{RA}$  is the percentage of Faculty with Ph.D. (or equivalent qualification) with respect to the total no. of faculty required or actual faculty whichever is higher, in the previous year.*

F1=Fraction with Experience up to 8 years;

F2= Fraction with Experience between 8+ to 15 years;

F3=Fraction with Experience > 15 years.

- **$FE = 6 \min(3F1, 1) + 6 \min(3F2, 1) + 8 \min(3F3, 1)$**

Rationale: Full marks for a ratio of 1:1:1

- **$FQE = FQ + FE$**
- *Primary Data: Faculty List in the Prescribed Format.*

**B. Student Strength including Ph.D. students (SS): 30 Marks**

- $SS = f(N_T, N_E) \times 20 + f(N_P) \times 10$
- The functions  $f(N_T, N_E)$  and  $f(N_P)$  are functions to be determined by NIRF.
- $N_T$ : Total sanctioned approved intake in the institution considering all UG and PG programs of the institution.
- $N_E$ : Total number of students enrolled in the institution considering all UG and PG Programs of the institution.
- $N_P$  = Total number of students enrolled for the doctoral program till previous academic year.
- **Primary Data: To be provided in a prescribed Format.**

**C. Metric for Number of Ph.D Students Graduated (GPHD): 30 Marks**

- **GPHD = 30 × f(N<sub>phd</sub>)**
- N<sub>phd</sub> = Average number of Ph.D students graduated (awarded Ph.D) over the previous three years.
- ***Primary Data: Number of graduating Ph.D. Students as reflected in the approved Annual Report/Convocation Report to be provided in the prescribed format.***



#### **4. Outreach and Inclusivity (OI): 100 marks**

- **Ranking weight: 0.10**
- **Overall Assessment Metric:  $OI = RD(30) + WD(30) + ESCS(20) + PCS(20)$**
- **The component metrics are explained on following pages:**
  - A. Percentage of Students from other States/ Countries (Region Diversity): RD**
  - B. Percentage of Women (Women Diversity): WD**
  - C. Percentage of SC/ST Students: SCTS**
  - D. Facilities for Physically Challenged Students: PCS**

**A. Percentage of Students from other States/ Countries (Region Diversity RD): 30 marks**

- **RD = 25 × fraction of total students enrolled from other states + 5 × fraction of students enrolled from other countries**
- *Primary Data: To be provided in the prescribed format.*

**B. Percentage of Women (Women Diversity WD): 30 marks**

- **$WD = 15 \times (N_{WS}/50) + 15 \times (N_{WF}/20)$**
- $N_{WS}$  are the percentage of Women students.
- $N_{WF}$  are the percentage of Women Faculty including the women members in senior administrative positions, such as Heads of Departments, Deans or Institute Heads.
- Expectation: 50% women students and 20% women faculty.
- ***Primary Data: To be provided in the prescribed format.***

**C. Percentage of SC/ST Students (SCTS): 20 marks**

- $SCTS = 20 \times f(N_{scts})$
- $N_{scts}$  is the percentage of UG students being provided full tuition fee reimbursement by the institution to pursue their degree programs.
- *Primary Data: To be provided by the institution in the prescribed format.*

**D. Facilities for Physically Challenged Students (PCS): 20 marks**

- **PCS = 20 marks, if the Institute provides full facilities for physically challenged students, as outlined.**

**Else, in proportion to facilities.**

- Basis: Verifiable Responses to Questions.
- *Primary Data: To be provided in a prescribed format.*

## **5. Perception (PR) – 100 marks**

- **Ranking weight: 0.1**
- **Overall Assessment Metric: PR = 100**
- **Component metrics are explained in the following pages:**
  - A. Peer Perception: Employers & Academic Peers: (PR)**

**A. Peer Perception: Employers & Academic Peer (PR) : 100 marks**

- This is to be done through a survey conducted over a large category of Employers, Professionals from Reputed Organizations and a large category of academics to ascertain their preference for graduates of different institutions.
- Comprehensive list will be prepared taking into account various sectors, regions, etc.
- Lists to be updated periodically.