

**Request for Proposal
For
Examination Management System**



**Aryabhatta Knowledge University,
Patna**

Tender Ref No. 005/Exam/012/02/2015-16 Dated: 20.02.2016

LAST DATE OF RECEIPT OF TENDER DOCUMENTS

29.03.2016 till 12:00 Noon

Tender Ref No. : 005/Exam/012/02/2015-16 Dated: 20.02.2016

Aryabhatta Knowledge University, Patna invites sealed tenders from interested and qualified firms for providing Examination Management system and related services. A document entitled "**Request for Proposal for Examination Management System**" can be downloaded from the website of AKU. Right to accept or reject any or all tenders without giving any reason is reserved with the university authority. For further details & detailed tender notice kindly visit <http://akubihar.ac.in> and <http://akubihar.org>

Registrar
AKU

TENDER NOTIFICATION

Aryabhatta Knowledge University, Patna invites bids from interested and qualified firms for providing an integrated Examination Management System to manage their examination related activities in a scientific and secured manner in order to bring in transparency, ease of operations and value to all stake holders. The Proposal entitled '**Request for Proposal for Examination Management System**' can be downloaded from the website www.akubihar.org and www.akubihar.ac.in on or before .

Qualified firms may submit their bids as per the specifications provided in the document, along with the EMD of Rupees 2,00,000/- only by way of a demand draft from a nationalized bank favouring " The Registrar , Aryabhatta Knowledge University , Patna payable at Patna." The last date to submit the bids is 29.03.2016 **till** 12:00 hours.

Registrar Aryabhatta Knowledge University, Patna

DISCLAIMER

This RFP document is not an agreement and is not an offer or invitation by Aryabhatta Knowledge University, Patna to any other Party. The purpose of the document is to provide interested bidders with information to assist in formulation of their Proposal. The RFP does not purport to contain all the information any bidder may require. The interested bidders should check the accuracy, reliability and completeness of the information in this RFP and respond suitably for the proposal.

The University may in their absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in the RFP document at any point of time before the submission of the proposal by the bidders.

TENDER NOTIFICATION

Date of commencement of Sale of tender document	: 20-02-2016
Last date and time for Receipt of tenders	: 29-03-2016 @ 12:00 hours
Date & Time of opening the tenders (Technical bid)	: 29-03-2016 @ 14:00 hours
Date & Time of opening Financial bid	: 31-03-2016 @ 15:00 hours
Cost of Tender Documents	: 5000/- (Five Thousand Only) only by way of demand draft from Nationalized bank in favour of Registrar Aryabhatta Knowledge University, Payable at Patna.
Date of Pre-bid Meeting	: 14.03.2016
Nature of bid Process	: Two bid system i.e. Technical bid & Financial bid systems
EMD Amount	: Rs. 2,00,000/- (Rs. Two Lakhs only)
Place Of Opening Of Tender:	ARYABHATTA KNOWLEDGE UNIVERSITY Chanakya National Law University Campus, Near Mithapur Bus Stand, Mithapur, Panta-800 001
Address For Communication:	The Registrar, ARYABHATTA KNOWLEDGE UNIVERSITY Chanakya National Law University Campus, Near Mithapur Bus Stand, Mithapur, Patna-800001

ABBREVIATIONS

AKU	Aryabhatta Knowledge University, Patna
CoE	Controller of Examinations
RFP	Request for Proposal
EMD	Earnest Money Deposit
SP	Service Provider or the tenderer or the bidder
EMS	Examination Management System that includes deployment of: i) Examination management software, necessary hardware, networking and system utility tools ii) Project management / operations, maintenance and support services iii) Manpower and support systems to deliver the mandated services as per scope of work
QP	Question Paper
AS	Answer Script/Answer Book
RP	Result Processing
DCA	Digital Certificate Authentication
NC / DRC	Nodal Centre / Disaster Recovery Centre
SOA	Service Oriented Architecture

1. INTRODUCTION

1.1 About The University

The Aryabhatta Knowledge University Act 2008 provides for the establishment of University at Patna to conduct and facilitate affiliation of institutions in the conventional as well new frontiers of professional education. All colleges and institutions imparting professional education for example Engineering and Technology including information Technology, Nano technology & Biotechnology, Management, Medicine, Health technology, Public Health Pharmacy, Optometry, Nursing, Education, Law etc. is to be affiliated to this university.

Technical Education had been a key priority in the state of Bihar, and it had established several prestigious Technical institutes in the State. The most prestigious institutes of the State, Bihar College of Engineering established in 1900, has been converted as centrally Funded Institute, namely National institute of Technology, Patna in February 2004. Other old & prestigious Institutions are Bhagalpur college of Engineering under Tilka Manjhi University, Bhagalpur and Muzaffarpur institute of Technology under BRBA Bihar University, Muzaffarpur.

BIT Sindri, Which is now is state of Jharkhand, was also established by state of Bihar. These institutes offered high quality Technical Education, and their alumni today have achieved National and International Recognition.

Aryabhatta Knowledge University (AKU), Patna has been established by Government of Bihar for the development and management of educational infrastructure related to technical, medical, management and allied professional education in the state. The objective of the university is to promote the professional education infrastructure to meet the national standard through well advanced course, infrastructure and quality faculty. Bihar lacks in the infrastructure both in the terms of number of institutions and the quality of education. As a result Bihar state has become the major hub of students migrating to the others states for pursuing their education and carrier building for future growth.

1.2 Examination Management System (EMS) – Benefits to Stakeholders

The proposed EMS is expected to bring in the following benefits to all stakeholders of the University.

Stakeholders	Benefits
Students	Online hall ticket generation, exam schedule, on time processing and delivery of exam results
Colleges	online and on time submission of student data viz., attendance and fee details, access to exam schedule and instant access and delivery of QP for conduct of exams in a secured manner
Faculties	Instant access to student data & exam schedule, online evaluation of AS option for comments and feedback while evaluating the AS and payment system for online evaluation
Exam section / office of the CoE	Work Flow mechanism with Audit trail, Red alerts, Status update of QP delivery and AS evaluation, final result processing, option for online moderation & scientific analysis of exam results and MIS reports / dashboards for instant decision making
University	Online status update with all stakeholders, conduct of exams in a secured and hassle free manner, timely declaration of results, generation of various MIS reports for decision making and value creation for all stake holders viz., students, faculties, colleges etc by way of bringing in transparency, ease of operations and reduced stress on the whole processes

1.3 Request for Proposal

Tenders are invited from eligible, reputed, qualified Firms with sound capabilities for implementation of Examination Management System for the University, as detailed out in the Scope of Work of this RFP Document. This invitation to bid is open to all Bidders meeting the prequalification criteria as mentioned in this RFP Document.

1.4 Pre-Qualification Criteria

Prospective bidders meeting the following minimum pre-qualification criteria are ONLY eligible to respond to this RFP.

Sr. No.	Criteria	Supporting Documents
1	The bidder should be a company registered under the Indian Companies Act 1956 and should have been in existence for at least 3 years as on 31 st March 2015	Certified copy of Company Registration Certificate issued by the Registrars of Companies (RoC)
2	The bidder should have an average annual turnover of Rs.10 Crores in the Financial Years 12-13, 13-14 and 14-15 from software services. (Revenues from sale of computer Hardware, sale of Software Licenses and BPO / call centre revenues will not be considered for this purpose)	Chartered Accountant's Certificate to this effect Copy of Memorandum of Agreement (MoA) as a proof that firm is in business of software Services
3	The bidder should have implemented similar EMS projects for minimum three universities in India in the last three years put together	Certified copies of Letter of Intent / Agreements / Contract
4	The bidder should have delivered EMS services to at least 1 lac students for all clients put together in the last three years as above in clause 1.4(3) for Indian universities or school education boards	Certified copies of Letter of Intent / Agreements / contract and self declaration by the bidder
5	The bidder should be registered with statutory authorities as required	Certified copies of Service Tax Registration Certificate, VAT registration Certificate, PAN Card copy etc should be attached
6	The bidder should have a Net Worth of at least Rs. 03 Crores as on 31 st March 2015	Chartered Accountant's Certificate
7	The bidder should possess valid ISO certifications for quality management and Information Security management such ISO 9001:2008 and ISO 27001:2013 .The bidder should be CMMi level 3 certified for both development and services.	Certified copies should be attached
8	The Bidder should not be under a deflation of ineligibility or Blacklisted in any government / university	Self declaration
9	Bids can be submitted as consortium and in case of consortium the following conditions are applicable a. Only two partners are allowed in the consortium b. Any one of the bidders shall meet the above mentioned minimum qualification criteria. c. However both the consortium partners should be registered companies in India operating in the technology domain with minimum turnover of Rs.10 crores during the last 3 years d. The prime bidder must be the original developer and owner of the proposed EMS solution and the software e. Any one of the bidders must have ISO 9001:2008 and ISO 27001: 2013 certification f. Any one of the bidders can fulfill the financial criteria as per clause 1.4(2 & 6) above to implement the proposed solution	

2. OVERALL SCOPE OF WORK

2.1 General Scope for EMS services

The proposed EMS solution for the university would involve implementation, operations and maintenance services to automate the Examination processes of the university from exam scheduling to hall ticket generation to QP delivery in a secured environment to online evaluation of AS to result processing & publishing to digitally authenticating the certificates & mark sheets and finally up to printing of reports etc.

The Service Provider (SP) shall be responsible to ensure that all the underlying hardware, software and services are installed and managed by them to ensure conformance to service levels as per the scope of work provided in the RFP. An indicative infrastructure resources, technology solution delivery and continued support to the project, according to the considered opinion of the university include the following. This list is not exhaustive and the university shall not be responsible for completeness of the resources listed herein and, therefore, the bidder is expected to have the required professional expertise and experience to ensure conformance to the requirements of the solution as per the RFP.

1. Implementation of a robust Application Software for handling the proposed Examination Management System fully configurable to the university requirements with necessary system applications and utility tools
2. Handling of Complete Project Management of the proposed EMS solution
3. Setting up of required Computer Hardware such as servers, desktops, printers, scanners etc along with required networking infrastructure
4. Ability to seamlessly integrate the proposed EMS with other legacy system currently available with the university.
5. Continued Operation and trouble free maintenance of the proposed EMS solution and IT infrastructure for a period of six years after 'Go Live'
6. Providing Managed services support in a distributed environment covering the affiliated colleges, regional centres, evaluation centres etc to ensure optimal performance
7. The proposed solution should cater to the current and future demands of the university w.r.t. to the increase in the number of students, colleges, Examination centres, valuation centres and faculties etc
8. The proposed solution should have the ability to seamlessly integrate and function across various devices such as desktops, laptops, tablets and mobile devices etc
9. The proposed EMS solution shall have suitable quality and data security control systems tightly integrated including data protection, intrusion detection and log report generation etc for enhanced security of the crucial data pertaining to examination processes

2.2 IT infrastructure and services

- A. All required IT infrastructure will be installed and managed by the SP during the subsistence of the contract. Some of the indicative IT infrastructures are given below and it's the responsibility of the SP to deploy the IT infrastructure as deemed fit to ensure "the scope of services" as per the RFP is delivered:

1. Suitable and required number of Computer Servers, desktop computers, networking, printers, storage and system utility tools should be installed in the

university campus to act as **Nodal centre** (NC) connecting the university with all affiliated colleges for the examination management system.

2. Required computer systems and other IT assets along with system utility tools should be installed by the SP at identified exam centres to enable QP delivery
3. Required systems, scanning facility and system utility tools should be installed by the SP at each identified regional centres / scanning centres for AS scanning and to enable distributed evaluation by registered faculties
4. Disaster Recovery Centre (DRC) in a different seismic zone should be provided and managed ongoing basis by the SP during the duration of the contract period
5. Required Standard Operating Procedures (SoP) should be put in place by the SP to continually maintain the said project with 99.00% uptime
6. Required software application module should ensure 100% compliance to the examination life cycle for the distributed services such as Hall Ticket Generation, QP Delivery, Scanning Operations, digital Evaluation, Online Publishing of results, enable printing of mark sheets and award of relevant certificates, re-valuation, etc.
7. The SP shall ensure it has all software licences used in EMS
8. Suitable technical Help desk should be installed by the SP to provide both voice based (English and Hindi) and system based support

B. The university shall provide the following facilities and approvals to the SP without any cost consideration and on time to implement the said project flawlessly:

1. Sufficient space in the university to set up Nodal Centre, space in the colleges / exam centres to set up QP delivery facilities and required space in each of the regional centres of the University for scanning the AS and enabling distributed evaluation. The facilities provided will have suitable power, back-up power, UPS, required internet bandwidth along with redundancy as per the specifications given by the SP and additionally Air conditioners in the Nodal Center and Scanning centres
2. The University shall provide the computer lab with required number of computers, power, back up power with UPS, required internet facility, etc free of cost at all evaluation centers for conducting digital valuation of answer scripts
3. Faculties, examiners, officials and support staff to manage the academic part of the EMS project such as QP setting, QP printing at exam centre, AS evaluation, result processing and moderation and approvals etc
4. Data of the students, faculties, colleges and other relevant data in electronic format and duly validated by the office of the CoE should be given to the SP to be uploaded into the system.
5. Course details, Exam schedule, fees details, attendance details should be either directly entered into the system provided by the SP or will be provided in electronic format duly validated by the office of the CoE so as to upload the same by the SP
6. All activities broadly under the aegis of Academic Administration shall be undertaken by the university while the activities under the broader aegis of technology Administration of the EMS project will be undertaken by the SP.

2.3 Managed Application Services (MAS)

The complete EMS project management and operation should be delivered as Managed Application Services (MAS) as per the scope of work with full responsibility and accountability of the IT administration by the SP leaving the academic part of the project with the university. Under no circumstances the SP shall have access to the academic data of the proposed EMS project such as QP, AS, mark details etc and the SP shall ensure the proposed system is built based on this specific requirement of the university. It should be clearly understood that the SP shall be only

the technology platform provider for managing the examination services using the technology platform and shall have no administrative control on the conduct of the examination processes in whatsoever manner.

2.4 Duration

The initial duration of the contract shall be for a period of 6 years. On completion of the six year term, the contract may be further renewed after mutual discussions and consideration of any special terms that may be added, amended or existing terms that may be deleted.

2.5 The proposed locations of the project:

The proposed EMS solution for the university will be undertaken in the following locations:

1. The university Head Quarters which shall act as the Nodal Centre or Nerve Centre of the whole Examination Management System.
2. The affiliated colleges or identified examination centres to act as delivery centers for QP delivery
3. The regional/evaluation centres of the University for Scanning of AS and enabling distributed evaluation. The maximum number of such scanning centres at any point of time shall not be more than five
4. The Evaluation locations - The Evaluation of digitized answer books shall be "completely online" viz., Distributed mode. Under distributed evaluation the evaluators can use any of their systems to carry out the evaluation by connecting to the main server hosting the EMS solution and the digitized AS. However if required the university may identify desired/mutually agreed affiliated colleges to act as evaluation centres. The systems required in such evaluation centres shall be provided by the respective colleges / evaluation centres along with required internet bandwidth and UPS etc as per the spec given by the SP. The mode of evaluation shall be decided in consultation with the SP in the best interest of the university

2.6 Financing model of the project

1. The entire project along with required IT infrastructure, application software and related system utility tools shall be installed by the SP at his own cost as deemed and appropriate to deliver the "scope of services" as mandated by the university.
2. The university shall NOT pay for any of the above IT infrastructural facilities that will be installed by the SP but will pay the SP based on the number of QP delivered and /or the number of AS evaluated using the proposed EMS system during the subsistence of the contract. It should be expressly understood that the payment of consideration shall not be made for the Capital goods installed by the SP but for the services delivered by the SP as per the scope of services in the RFP
3. The payments shall be made for every examination cycle based on the above deliverables by the SP and as per the commercial terms agreed by both the parties.

2.7 Governing Law and Jurisdiction

The bids submitted shall be subject to the governing laws of India and the legal jurisdiction shall be Patna, Bihar India for any disputes

2.8 Implementation

The project shall be implemented within the stipulated time which shall be communicated to the successful bidder while awarding the Letter of Intent. The lead time that will be given to the successful bidder shall be not more than 30 days to set up the project and "go live" for the exam cycle under consideration. Normally exams are conducted twice during the year viz., June and December and the SP shall ensure timely deployment of the project as in clause 2.2(A) above and roll out the services for the exam cycle under consideration once the award is given. The university shall provide the support as detailed under clause 2.2(B) above

2.9 Training & Support

The successful bidder shall provide training on the implementation of the project to all stake holders viz., office of the CoE, officers and staff of examination department and should provide standard training manual as part of the training processes

The successful bidder shall also ensure setting up of technical help desk (both in English and Hindi) before the project goes live and demonstrate the same to the office of the CoE

2.10 Maintenance & Upgradation

The successful bidder should ensure the project installed shall be maintained to its optimal performance during the contract period and continuous upgradation of the IT systems and application software application are done to give the best of the deliverables to the university under the said project

The SP shall maintain 99% uptime at all times during the implementation of the EMS project

2.11 Point of Contact

The SP shall provide a single point of contact as below who will be responsible for implementation and maintenance of the project. In case of any change in the contact person at a later point of time, the SP should communicate the same to the university.

Name:

Designation:

Phone no; Email

id:

2.12 Other Important guidelines for EMS Tender:

- a) The examination delivery system must provide for safe and secure testing and scoring environment
- b) The system must employ a framework that ensures the most efficient processing time
- c) The system must allow for both the scoring of objective and subjective responses e.g open ended and constructed response questions.

- d) The system must provide for real time, live reporting of scoring progress and accurate time projections for reporting of results
- e) The system must employ a flexible framework that allows for real-time adjustments in scoring rubrics and for reporting of results
- f) Data resulting from system should be compatible reliable data management system
- g) The system must allow real time monitoring and evaluation of test scores and questions by administrators.

3. FUNCTIONAL REQUIREMENT SPECIFICATIONS

The Successful bidder should develop the SRS document for the scope of services before implementing the project and get the same signed off by the university in order to agree on the deliverables mutually. The EMS should have features like Availability, Interoperability, Performance, Robustness, scalability, etc. The Project will be in phase manner.

The overall functional area of the solution is described as below:

SI No	Section	Particulars
-------	---------	-------------

1	I	Pre-Examination System covering exam scheduling, attendance and fee management, hall ticket generation etc
2	II	Secured Question Paper Delivery System
3	III	Digital Valuation System
4	IV	Post Examination System covering result processing, moderation, digital authentication of certificates, post exam report generation etc

Section I: Pre-Examination System Specifications

The proposed system should:

1. Support management of master data related to Courses, Branches, Subjects, Colleges and Students. Bulk data upload option should be made available for the master data management.
2. Be able to handle the exam related processes for both ex-students along with the regular batch students. All students should be provided with a PRN number in the system.
3. Enable the University to define exam fee details and the schedule of exam fee payment.
4. Make necessary provisions for exam application and exam fee payment. The college Principal should have the right to approve / reject exam applications.
5. Allow entry of internal marks by authorised college officials. The college Principal should have the right to approve / reject the entered internal marks along with remarks.

6. Generate the hall ticket / admit card for the students based on the exam applications as per the norms of University. The authorised college officials should have the provision to view and print the hall ticket / admit card before the examination process.
7. Allow bulk upload, publish and update of the exam schedule / time table.
8. Provide user interfaces for management of the external examiners / exam supervisors for invigilation process of the scheduled theory & practical exams based on the zone, college, exam series, course, batch and semester.
9. Have options for the University to create indent for question paper delivery according to the number of students who have applied for the exams in each college / exam centres.
10. Provide collegewise/centrewise roll number list consisting of College Name, centre name, Exam Name, Course, Subject, Date of Exam, Batch, Semester, Unique Student Identity Code, Student Name and Photo for a particular exam series.
11. Provide login credential to students, colleges & faculties/evaluators.
12. Provide interface for the authorized college officials to enter the details of exam absentees and malpractice / unfair means cases for every exam session.
13. Also have virtual notice board for University to upload important communications for view by the faculties and other authorized users.

Section II: Secured Question Paper Delivery System Specifications

1. The proposed system should have options for conducting multiple exams in a single day across all exam centers.
2. The system should generate question paper (QP) either through randomization of questions from QP databank OR through randomization of QPs authored by a set of QP setters (through invitation) OR direct QP upload by the authorized official of the University. The option of QP generation will be finalised by the Pro VC/COE depending on the requirement.
3. QP uploading from the university Nodal Centre (NC) for an exam session should happen only once and not on college by college basis. The proposed system should take care of QP delivery to the colleges / exam centres as per the QP indent.
4. Proper security and authentication systems should be put in place for secured delivery of QP from the NC to the colleges / exam centres.
5. The QPs published by the university from the NC as per the exam schedule should be electronically delivered to the colleges / exam centres instantaneously using industry standard encryption technology and other security systems as deemed appropriate to ensure the sanctity of the whole process.
6. The decryption and delivery of the question papers at the exam centres should be enabled through suitable password or unique key based authentication within the stipulated time, given by the university which is normally not more than one hour
7. The average TIME WINDOW for QP access and delivery of the same to the students in any college / exam centre should not be more than 45 minutes. This feature in the system should be parameterizable as per the specific requirements of the university.
8. It is the responsibility of the University to publish / push the question paper from the Nodal Centre (NC) to the Exam Centre using the technology provided by the service provider. At the exam centre the authorized official of the University along with the authorised college official shall use the keys to access the QP and deliver them to the students. Under no circumstances the employees of the SP shall have access to QPs at any point of time.
9. A proper tracking module to be deployed for Registrar / CoE to monitor the delivery of QPs vis-a-vis the exam schedule / indent.

Section III: Digital Valuation System Specifications

1. The proposed system should enable digitization of the hand written Answer Scripts (AS) with appropriate resolutions and store the same in the servers for online evaluation in a distributed environment by the registered faculties.
2. The evaluation process shall be "anytime, anywhere" with industry standard security features tightly integrated.
3. The digitization process should have
 - a. the ability to read Barcode / OMR from the AS
 - b. automatic generation of unique random numbers for each AS to ensure anonymity
 - c. masking of select fields on any or every page of the AS
4. The proposed system should have built in features for tracking the entire life cycle of the process viz., receipt of the physical AS from the University to digitising to sorting for preparation of examination, and handing over the same back to the University. The proposed system shall facilitate the university officials for stacking the AS in a storage area and then enable them to locate and pull out the physical AS from the storage area in case of any exigency.
5. The proposed system should enable Question paper and scheme / answer key fragmentation for digital evaluation of the AS
6. The proposed system should enable the digital evaluation of AS only by authorized evaluators of the University for which there must be an approval mechanism built in.
7. The proposed solution should provide suitable authentication using login id and password to the evaluators. Provision shall also be given for the password to be sent to the registered mobile numbers of the evaluators.
8. The system should dynamically allot the digitised AS to the registered evaluators through randomization and ensure complete secrecy in the whole process. Randomization and allocation of the AS should be fully automated.
9. The proposed digital evaluation system should be user friendly with AS, QP, Scheme and Marks Entry etc to be provided on the same screen in a single window with zoom in / out and rotation facility. The system should also have options for carrying out annotations during evaluation.
10. The un-evaluated AS by any particular faculty should get back to the common pool in the server at the end of the day and should be made available to other faculties for evaluation.
11. The proposed system should allow multiple levels of evaluation that will be configured by the University through a set of rules and configurable parameters.
12. The proposed system should provide option for certain percentage of the AS already evaluated to be allocated for moderator review and further evaluation as per the University norms.
13. A proper tracking system should be made available for monitoring the number of AS received by the SP, digitised, evaluated and pending evaluation have to be made available to the Pro VC / CoE.
14. The system should provide digitised copy of the AS along with marks to the students under RTI / Court reference or any other legal purpose as desired by the University.
15. The proposed system should have the feature to reevaluate the AS without disclosing the marks entered during the previous evaluation(s).
16. The system should have feature to extract copies of the digitised copy of AS along with marks and annotations by the University immediately after evaluation / declaration of results for record keeping purposes.
17. The proposed system should have stacking module for enabling proper storing and retrieval mechanism of physical answer scripts after scanning the answer scripts.
18. Hardware for the purpose of digitizing the Answersheet should be part of the scope.
19. Hardware for the purpose of evaluating of the digitized Answersheets will be available at evaluation centres/colleges

20. If the agency chooses to install temporary scanning infrastructure within university premises, the space and other required facility will be provided by university.
21. It is the responsibility of the university to provide evaluators, timely and pay them for their services. SP prices are excluded payment to evaluators.

Section IV: Post Examination System Specifications

1. The system should have provisions to define grades and grade points for allocating Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA).
2. The proposed system should provide ordinance / moderation facility for the authorised University officials to scientifically analyse the marks and take decisions related to grace marks and division benefit.
3. The CoE should be able to approve and publish / reject the results after all the moderations and ordinances have been done to the final results. The rejected results should be made available for rechecking by CoE.
4. The proposed system should enable view of the statistical analysis and reports (tabulation chart / assembly register) by the authorised University official.
5. The proposed system should allow the Pro VC / CoE of the University to view the pass, failed, absentees and withheld count and the count of students in each grade with respect to Exam, Degree, Course, gender, caste, Batch, Semester and Subject.
6. The system should allow the students to view the results online by entering their unique student identity code/PRN (Permanent Registration Number)
7. The system should provide options for the students to apply for revaluation, photocopy / viewing of the answer scripts/redressal.
8. The proposed system should enable viewing of answer scripts to the students after making the defined payment.
9. The proposed system should seamlessly integrate with the University web site and other approved Govt. websites for declaring the results.
10. The system should allow the authorised examination section staff officials to generate and print the mark sheets and certificates of the students with appropriate security features.
11. The proposed system should provide digital authentication of all certificates including mark sheets, degree certificates etc on a suitable web interface for "anytime & anywhere" validation of the certificates issued by the university
12. Paramatrix report generation for merit list/medal list as per rules & regulations of the university

4. GUIDELINES FOR BID PREPARATION

4.1 Preparation of Technical Proposal

1. The bidder is expected to respond using only the specified formats for the response, wherever applicable. Failure to use the specified formats may result in disqualification of the proposal.
2. The Technical Proposals must be direct, concise, precise and complete. Any information not directly relevant to this RFP, should not be included in the proposal. The university will evaluate bidder's proposal based upon its clarity and directness of its response to the requirements of the project as outlined in this RFP.
3. The bidder shall number all the pages of the Technical proposal including the annexure and other attachments and sign / affix initials each page
4. The technical proposal must not contain any price information.
5. The bidder must fully understand the scope of the solution and services as outlined in this RFP. The bidders are expected to examine, understand and comply with all the instructions, formats, terms & conditions, solution and services requirements and other information in this RFP document before submitting the bids. Failure to furnish all the information required by the RFP or submission of a proposal not substantially responsive to the RFP in every respect will be at the bidder's risk and may result in rejection of the proposal of the bidder.
6. If the bidder is required to confirm in the affidavit contained in the RFP that there are no infringements of any Patent or intellectual property rights or copy rights as per the applicable laws of relevant jurisdictions.

4.2 Technical Proposal structure and documents

1. **Covering letter and Signature** - The technical proposals should be accompanied with the "Technical Proposal covering letter" as per **Form T.1 of Annexure A**. The covering letters must be on the letter head of the bidder's organization and signed by a representative of the bidder, who is duly authorized, to act in respect of the proposal and commit the organization to contractual obligations arising out of the proposal.
2. **Structure of the Technical Proposal** - The University does not mandate that the Technical Proposal be structured in any specific fashion or sequence. The bidders use their own approach to structure the document so as to bring out clearly what the bidder intends to propose to the university for the said EMS project. However, all the forms and annexure should be in sequence and in place for ease of evaluation of the Technical Proposal.
3. **Documents for the Technical proposal** - Wherever there is a specific format provided to seek the information, the university expects bidders to use only these formats to provide that information. The bidder is free to use its own format for providing information in other areas. However the bidders are discouraged from providing scanned copies of brochures and presentation material as technical proposal.

4.3 Commercial Proposal

1. The bidder is expected to quote for all the components of the proposed solution, including cost of implementation and ongoing support required as per the scope of services mentioned in the RFP.
2. The bidder shall quote the fees "per exam paper per student" for the mandated services under the scope of services. However the bidder shall also quote individual component of the proposed services viz., QP delivery, Digital Evaluation and Result Processing for the purpose of clarity
3. Prices shall be quoted entirely in Indian Rupees.
4. It should be separately and clearly indicated how the local taxes will be applied for delivering these services by the bidder to the university.
5. The quoted price cannot have any hidden cost and cannot be conditional.

4.4 Payment Terms

The university shall decide in consultation with the successful bidder before agreeing to the terms of payment while awarding the contract. However broadly the payments shall be made based on the milestones of delivery under the scope of services such as QP delivery, AS scanning, digital evaluation, result processing and completion of the exam cycle etc.

4.5 Period of Validity of Bids

1. The proposals submitted by the bidders in response to the RFP shall be valid for a period of 90 days from the date of submission of the proposals. Any bid proposed to be valid for a shorter period may be rejected as non-responsive.

2. In exceptional circumstances, at its discretion, the university may solicit the bidder's consent for an extension of the validity period. The request and the responses thereto shall be made in writing or by email.
3. On signing of the contract, the prices quoted in the commercial proposal for the proposed EMS solution will be valid for the period of the contract. Escalation in the cost during the contract period is subject to mutual agreement between both the parties.

4.6 Correction of errors

1. Bidders are advised to exercise adequate care in quoting the prices. No corrections in the quoted price will be entertained after the bids are opened.
2. Arithmetic errors in proposals will be corrected as follows: In case of discrepancy between the amounts mentioned in figures and in words, the amount in words shall govern.
3. Discrepancy between the unit price and multiplied figure: If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected.

4.7 Force Majeure

If at any time during the continuance of this Contract, the performance in whole or in part by either party of any obligation under this contract shall be prevented or delayed by reasons of war, hostility, acts of the public enemy, epidemics, civil commotion, sabotage, fires, floods, explosion, quarantine restrictions, strikes, lockouts or any act of God (hereinafter referred to as such acts), neither party shall be by reasons of such event, be entitled to terminate this contract nor shall either party have any claim for damages against the other in respect of such non- performance or the delay in performance. The deliveries under the contract shall be resumed as soon as practicable after such events have come to an end or ceased to exist.

4.8 Dispute Resolution and Governing Law

In case any dispute between the Parties, both the parties will try to resolve the issue mutually within 15 days of dispute raised in writing. Affected party will give notice in writing to other party indicating concern, proposed remedy to settle the issue. If the issues are not settled by negotiation in the manner as prescribed, the same may be resolved by arbitration tribunal consisting of a three members. Each party shall nominate one member to the tribunal and both the members will select the presiding officer for the arbitral tribunal. The Arbitration shall be held in Hindi and in English language and conducted in accordance with the provisions of Arbitration and Conciliation Act and shall be conducted in fast track mode and the tribunal shall render a binding award within 90 days from the date of reference.. The award by the arbitral tribunal will be final and binding on both the parties

All disputes arising out of this contract shall be governed by the Laws of India and courts in Patna shall have exclusive jurisdiction to try any case.

4.9 Intellectual Property Rights (IPR)

- i. Any IPR developed, deployed or tested by the Bidder or its affiliates during the course of this project will vest absolutely with the Bidder. The University shall

acknowledge and agree to vest the IPR with the Bidder after expiry of the project tenure. This includes source code, process documents, flow charts, project management templates and other resources developed by the Bidder and / or their agents, associates and principal parties involved in the project.

- ii. No data of any sort including data on subject content, all examination and the University data, information, research and development, knowledge pertaining to the courses offered by the University, any other field of research and development, shall be used and / or extracted by the Bidder for any use whatsoever.

4.10 Indemnity

- i. The University shall indemnify and hold Bidder harmless against any and all liabilities, losses, damages, judgments, claims, causes of action, and costs (including attorneys' fees and disbursements) which Bidder may hereafter incur, suffer, or be required to pay, defend, settle, or satisfy as a result of third party claims against Bidder based on or arising out of: (i) representations or warranties made by the University to its affiliates, associates or any third parties or (ii) the University's failure to comply with its obligations to them under the scope of this contract. The Bidder will be indemnified by the University for any and all issues raised by their colleges, faculties / staff, students and parents or any public initiated litigations and / or claims.
- ii. The Bidder shall indemnify and hold the University harmless against any and all liabilities, losses, damages, judgments, claims, causes of action and costs (including attorney's fees and disbursements) which the University may hereafter incur, suffer, or be required to pay, defend, settle or satisfy as a result of third party claims against the University based on or arising out of (i) representations or warranties made by the Bidder to its affiliates, associates or any third parties or (ii) Bidder's failure to comply with its obligations to them under the scope of this contract.

4.11 Information security and data privacy

The SP will be responsible for providing suitable security systems while implementing the EMS project to protect the continuing interest of the university. The SP once awarded the contract is expected to adhere to Information Security Management procedures as per acceptable standards with best practices. The SP shall be responsible for guarding the Systems against virus, malware, spyware and spam infections using the latest Antivirus which include anti-malware, anti-spyware and anti-spam solution for the entire system. The SP shall have to maintain strict privacy and confidentiality of all the data it gets access to.

5. BID EVALUATION PROCESS

5.1 Proposal Evaluation Process

1. Proposals will be evaluated by a Committee of Experts (the "Committee") appointed by the university. Evaluations of bids will be only on the basis of information provided by the bidders in the proposals.
2. The bids submitted with required EMD only considered
3. Evaluation of the bids will be done in the following sequence and at the end of every stage, short listed bidders will be informed of the results of evaluation
 - a. Scrutiny of Bid Security and adherence to general guidelines
 - b. Evaluation of prequalification proposal
 - c. Evaluation of Technical proposal
 - d. Opening of commercial proposal
 - e. Final evaluation of the Techno commercial bid and finalization of the bid

Only those bids that have been technically qualified will be considered for opening the commercial bid. **The bids of the bidders who are not technically qualified shall be returned to the bidders without opening their commercial bid.**

5.2 Technical Proposal Evaluation

1. The Technical bid will be scrutinized for complying with the following requirements before going ahead with further evaluation of the bid.
 - a. Proposal Covering letter as response to the RFP
 - b. Undertaking for non-infringement of patent/copyrights
2. Evaluation of the solution – the technical solution proposed by the bidder may be evaluated against the response to the RFP and The final decision of the technical evaluation of the proposals submitted by the bidders shall vest with the university and the decision of the expert committee appointed by the university on the technical evaluation of the proposals shall be final and binding on all the bidders.

3. The Examination Management System sought by the university being sensitive and critical for the stake holders including students and faculties and involves the brand reputation of the university, it is hereby informed that strict compliance to the technical specs vs the solution proposed by the bidders.

5.3 Scoring of Technical Bids and Technical Qualification

Sl. No	Particulars	Score
1	Technical Capability of the bidder as a solution provider for the EMS solution	20
2	ISO 9001:2008 & ISO 27001:2013 Certificates	10
3	Financial Capability as per clause no. 1.4 (2 & 6) of RFP	10
4	Experience in Similar Project implementation	20
	Minimum 3 universities / school education boards	5
	From 3 - 5 universities / school education boards	10
	Above 5 universities / school education boards	20
5	Experience of delivering a minimum of 2 Lakhs question papers and enabling digital valuation of 2 lakhs answer scripts during each exam cycle	20
	=>2 lac question papers & answer scripts	5
	Between 5 to 10 lac question papers & answer scripts	10
	More than 10 lac question papers & answer scripts	20
6	Approach and Methodology*	20
	Understanding of Requirements	5
	Experience on implementation, operational excellence and customer feedback	10
	Project Management and implementation Plan	5
*Approach and Methodology will be evaluated based on quality of the solution proposed, presentation/discussions, appreciation certificates by other universities / school education boards, live site visit and years of experience in managing EMS projects		

5.4 Commercial Evaluation

The bidders, whose **Technical Score is 70 (seventy) and above** only shall qualify to for commercial evaluation, and the commercial bid of only these bidders will be opened.

5.5 Composite Evaluation

- a. **Techno commercial Evaluation:** All the bids for which the commercial proposals are opened and which are in order will be evaluated using a composite Techno Commercial Evaluation approach.

b. The weightage given to the Technical and Commercial Proposals are:

Technical = 75% (weightage for Technical Proposal)

Commercial = 25% (weightage for Commercial Proposal)

c. Technical Score (TS): The score obtained by the bidder in the technical evaluation which should be equal to or more than 70 (seventy).

d. The Commercial Score (CS): The score obtained by the technically qualified bidder.

e. The Final Score (FS_n) out of the combined Techno commercial evaluation for a particular bidder shall be arrived as below:

$$\text{Final Score (FS}_n\text{)} = (\text{TS}_n \times 0.75) + (\text{CS}_n \times 0.25)$$

Where n stands for the bidder under consideration

f. Calculation of the Commercial Scores (CS)

i. Total Commercial Proposal: The Total Commercial Proposal of the bid will be the price quoted by the bidder in the commercial proposal for the scope of services contained in the RFP. Applicable taxes extra.

ii. Identification of the Lowest bid: Based on the Cost of each of the bidders, the bidder with the lowest price is identified as L1. All the other bids are listed based on the increasing value of L.

iii. Calculation of the Commercial Score: The commercial Score for each of the bidders is calculated by using the method as below.

i. The bid with the lowest price I (L1) will be given the maximum commercial score (CS) of 100 points.

ii. The formula for determining the commercial score for the other bids is the following: $\text{CS}_n = 100 \times \text{L1}/\text{L}_n$, in which CS_n is the financial score for bidder n, L1 is the lowest bid value and L_n is the bid value of the proposal under consideration.

5.6 Identification of the successful bidder

The Final Score (FS_n) for the successful bidder will be calculated as follows:

$$\text{FS}_n = (\text{TS}_n \times 0.75) + (\text{CS}_n \times 0.25)$$

The combined score of the bidder achieving the highest FS_n will be considered to declare the successful bidder.

5.7 Notification of Award and signing of contract

1. The university will award the Contract to the bidder whose proposal has been determined to be the successful bidder based on the above evaluation method.
2. The university reserves the right to negotiate further with the bidder whose proposal has been accepted as successful bidder.
3. Prior to the expiration of the validity period, The University will notify through a "**Letter of Intent**", to the successful bidder in writing that their proposal has been accepted and invite them for signing a formal contract.
4. **Signing the contract**- The University shall execute a formal contract with the SP on mutually agreeable terms and conditions and as per the RFP and the bid submitted in response to the RFP by incorporating all necessary terms and conditions to protect the continuing interest of both the parties while implementing the said project. The contract

shall clearly specify the deliverables under the scope of service, duration of the contract, payment terms, performance metrics and responsibility matrix of both the parties and protection of the interest of both the parties, penalty for non-performance of both the parties, force majeure etc in accordance with the Indian contracts Act. Any amendment to the contract if required during the period of subsistence of the contract shall be carried out as addendum to the existing contract after both the parties agree to the terms thereof.

5.8 Short Closure of the Contract

- a) The proposed EMS project being sensitive and have impact on the students community, the University shall vest the rights to short close the contract awarded to the successful bidder, in case the bidder fails to deliver the services as per the scope of work for a continued period of six months or one exam cycle whichever is shorter. However, the contract shall not be short closed for any reason, whatsoever, other than the non-performance related of the SP. issues. Further the university understands that the SP may have to invest substantial money and resources in implementing the proposed EMS project and hence guarantees the SP that the contract once awarded shall continue to be performing as long as the services mandated under the scope of services are delivered by the SP professionally and timely. For non-compliance of the same, the university has the right to initiate actions against the SP after giving reasonable opportunity to the SP to course correct themselves and after following principles of natural justice.
- b) During the contract period if university found the SP was blacklisted and given wrong self declaration regarding its blacklist status in any government/university then university will cancel the contract immediately and all its payable, security deposit, etc will be forfeited.

5.9 Security Deposit:

- a) Successful bidder who have deposited Rs.2,00,000/- EMD should have to deposit 5% of total cost of Work Order as Security deposit within specific /stipulated period prescribed by University in the form of Demand Draft / Bankers Cheque/ Pay Order./F.D.R. in favour Registrar, Aryabhata Knowledge University, Patna.
- b) The tenderer availing the facility of exemption shall have to deposit 5% as Security Deposit. within specific /stipulated period prescribed by University after acceptance of their rates in the forms Demand Draft / pay Order / banker Cheque / F.D.R. in favour Registrar, Aryabhata Knowledge University, Patna.
- c) The security Deposit / Tender Deposit / Earnest Money Deposit of successful bidder will be refunded only after completion of final supply as per terms & conditions / Agreement.
- d) Failure of the successful bidder to deposit Security Deposit within prescribed time limit shall constitute sufficient grounds for the annulment of the award. In this event the University may make the award to the next lowest evaluated bidder or call for new bids

5.10 Lack of Competition

1. If a situation arises where if after evaluation of bids, the tendering authority ends up with one responsive Bid only and in such situation, the tendering authority would check as to whether while floating the tender all necessary requirements to encourage competition like standard bid conditions, industry friendly specifications, wide publicity, sufficient time

for formulation of Bids, etc were fulfilled. If not, the tender would be re-floated after rectifying deficiencies.

2. The bid process shall be considered valid even if there is one responsive Bid, provided that:
 - i. the Bid is technically qualified
 - ii. the price quoted by the bidder is assessed to be reasonable
 - iii. the Bid is unconditional and complete in all respects
 - iv. there are no obvious indicators of cartelization amongst bidders and
 - v. the bidder is qualified as per the provisions of pre-qualification/ eligibility criteria in the bidding document
3. The tendering authority shall prepare a justification note for approval by the next higher authority of the procuring entity and with the concurrence of the committee.
4. In case of dissent by any member of bid evaluation committee, the next higher authority in delegation of financial powers shall decide as to whether to sanction the single Bid or re-invite Bids after recording reasons.
5. If a decision to re-invite the Bids is taken, market assessment shall be carried out for estimation of market depth, eligibility criteria and cost estimate.

6. BID FORMATS

Details	Formats
Response Formats for Technical Proposal	Annexure A
Response Formats for Commercial Proposal	Annexure B

6.1 Annexure A

Response Formats for Technical Proposal

Requirements / Purpose	Formats
Technical Proposal Covering Letter	Form T.1
Relevant Customer base in India	Form T.2
Profile of Team	Form T.3
Broader Project Plan of the proposed solution	Form T.4
Non infringement of Patent Rights/copyrights	Form T.5

6.2 Annexure B

Response Formats for Commercial Proposal

Requirements / Purpose	Formats
Commercial Proposal Covering Letter	Form C.1
Price Schedule	Form C.2

Form T.1

Technical Proposal Covering Letter

(Company letter head)

[Date]

The Registrar,

Aryabhatta Knowledge University,
Patna

Dear Sir,

Ref: Request for Proposal for implement EMS of TheUniversity

Having examined the bid document, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the services for implementation of EMS for the university as required and outlined in the RFP.

We attach hereto the bid technical proposal as required by the bid document, which constitutes our proposal.

We undertake, if our proposal is accepted, to provide all the services put forward in this RFP or such features as may subsequently be mutually agreed between us and the University or its appointed representatives.

We agree for unconditional acceptance of all the terms and conditions set out in the bid document and also agree to abide by this bid response for a period of six months from the date fixed for bid opening and it shall remain binding upon us with full force and virtue, until within this period a formal contract is prepared and executed. This bid response, together with your written acceptance thereof in your notification of award, shall constitute a binding contract between us and the university.

We confirm that the information contained in this proposal or any part thereof, including its exhibits, schedules, and other documents and instruments delivered or to be delivered to the university is true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead the university as to any material fact.

We agree that you are not bound to accept the lowest or any bid response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ service specified in the bid response without assigning any reason whatsoever.

It is hereby confirmed that I/We are entitled to act on behalf of our corporation/company/ firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this Day of **201**

(Signature)

(In the capacity of)

Request For Proposal for Examination Management System

Duly authorized to sign the Bid Response for and on behalf of:

(Name and Address of Company) Seal/Stamp of bidder

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, certify that I am<designation>..... of the<Company Name>....., and that<Name of the Respondent>..... who signed the above response is authorized to bind the company by authority of its governing body.

Date

(Seal here)

Request For Proposal for Examination Management System

Form T.2

Relevant Customer base in India

To be submitted on the Letterhead (Place) (Date)

The Registrar,

Aryabhatta Knowledge University,
Patna

Dear Sir

We would like to provide the following information on our customer base in India to confirm that we have been offering our EMS solution in India for the last three years.

Details **	Name of client	Year implemented
Name of the university / school education board where the EMS Solution has been implemented. Provide complete address and contact details such as phone no, email id etc	1. 2. 3. 4. 5.	
Product Name (if applicable)		

** Attach relevant certificates

Dated this ___ day of ___201_

Yours sincerely,

On behalf of []

Authorized Signature [In full and initials]:

Name and Title of Signatory:

Name of Firm:

Address:

Seal/Stamp

Form T.3

Profile of Team

Project Manager

1. Name of the person	
2. Role in the Project	
3. Qualification	
4. Total number of years of experience	
5. Number of years with the current company (the bidder)	
6. Functional area / expertise	
7. Number of complete life cycle EMS implementations carried out	

Functional and Technical Head

1. Name of the person	
2. Role in the Project	
3. Qualification	
4. Total number of years of experience	
5. Number of years with the current company (the bidder)	
6. Functional area / expertise	
7. Number of complete life cycle EMS implementations carried out	

Form T.4

Broader Project Plan of the proposed solution

Proposed activity	No of Manpower / Resource required	100% Compliance RFP to	@ Start date	@ End date
Pre Exam		Yes / No		
QP delivery				
Digital evaluation				
Post Exam				

@ Provide GANTT chart

Form T.5

Non infringement of Patent Rights/copyrights Confirmation

(Company letter head)

[Date]

To

The Registrar,

Aryabhatta Knowledge University,
Patna

Sub: Undertaking on non infringement of Patent Rights/copy rights

Dear Sir,

I/We do hereby undertake that none of the deliverables being provided by us is infringing on any patent or intellectual property rights as per the applicable laws of relevant jurisdictions having requisite competence.

I/We also confirm that there shall be no infringement of any patent or intellectual property rights as per the applicable laws of relevant jurisdictions having requisite competence, in respect of the equipment's, systems or any part thereof to be supplied by us. We shall indemnify the university against all cost/claims/legal claims/liabilities arising from third party claim in this regard at any time on account of the infringement or unauthorized use of patent or intellectual and industrial property rights of any such parties. Without prejudice to the aforesaid indemnity, we shall be responsible for the completion of the supplies of the software / applications including upgrades as and when they are made available and uninterrupted use of the software solution and/or system or any part thereof to the university, irrespective of the fact of claims of infringement of any or all the rights mentioned above. If at a later date it is found that it does infringe on patent rights, I/We absolve and indemnify the University of any Legal Action.

Yours faithfully,

Authorized Signatory

Designation

Bidder's corporate name

Form C.1

Commercial Proposal Covering letter

[Date]

The Registrar,

Aryabhatta Knowledge University,
Patna

Ref: Commercial Proposal for providing the EMS solutions Dear Sir,

Having examined the Bid Document, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide service for implementing the EMS of the university to meet such requirements and to provide services as set out in the bid document. Following is our quotation summarizing our commercial proposal.

We attach hereto the commercial proposal as required by the Bid document, which constitutes our proposal.

We undertake, if our proposal is accepted, to provide all the services to implement the EMS solution as put forward in the RFP.

We agree for acceptance of all the terms and conditions in the bid document and also agree to abide by the bid response for a period of SIX MONTHS from the date of opening the commercial bid and it shall remain binding upon us until such time a formal contract is prepared and executed within the six months.

We agree that you are not bound to accept the lowest or any bid response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the bid response without assigning any reason whatsoever.

It is hereby confirmed that I/We are entitled to act on behalf of our corporation/company/ firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this Day of **201**

(Signature)

(In the capacity of)

Duly authorized to sign the Bid Response for and on behalf of:

(Name and Address of Company)

Seal/Stamp of bidder

Request For Proposal for Examination Management System

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, certify that I am of the, and that who signed the above proposal is authorized to bind the corporation by authority of its governing body.

Form C.2

Price Schedule

Company

letterhead Date:

The Registrar,

Aryabhatta Knowledge University,
Patna

Sub: Commercial quote for providing the EMS solutions
Dear Sir,

S. No.	Item description	Rate per exam paper / student in Rs.
1.	Examination Management System a) Pre exam services b) QP delivery services c) Digital evaluation services d) Post exam services	
2	Total amount per exam paper / student in Rs.	
3.	Please specify, if any other	

----- **End of the document** -----