



I.K. GUJRAL PUNJAB TECHNICAL UNIVERSITY

**JALANDHAR-KAPURTHALA HIGHWAY,
KAPURTHALA**

E-TENDER DOCUMENT

2018

FOR

**SCANNING AND ON SCREEN MARKING (OSM)
OF ANSWER BOOKS**

**I.K. GUJRAL PUNJAB TECHNICAL UNIVERSITY
JALANDHAR-KAPURTHALA HIGHWAY, KAPURTHALA**

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E-TENDER NOTICE

E-Tender No. –I.K.G. PTU/2018-19/

The I.K.Gujral Punjab Technical University invites bids from interested and qualified firms for providing **On Screen Marking of Answer Books** 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.

Online tenders are invited as detailed below:-

Name of Item		Cost of Tender Document	Earnest Money	Tender Processing Fee
1.Scanning of Answer Books	1A. after cutting of Answer Books	Rs. 1000/ - (GST Extra @ 18%)	Rs. 75000/-	Tender Processing Fee shall be paid online (as mentioned on Web Portal https://eproc.punjab.gov.in)
	1B. without cutting of Answer Books			
2. On Screen Marking (OSM) of Answer Books				

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Important Dates:-

Last Date of submission of online Tender	Date and Time of opening of Technical Bid	Date and Time of opening of Financial Bid	Venue
14 days after the date of advertisement in the news papers	Next working day after the last date of submission of online tender at 11:00 am	To be intimated later to the bidders who will qualify technical bid.	O/O Controller (Examination) I.K.G. PTU Jalandhar-Kapurthala Highway Kapurthala.

1. The tender document can be downloaded from website <https://eproc.punjab.gov.in> Tenders shall be opened at above mentioned places in the presence of parties or their representative who may like to be present. For participating in the above e-tendering process, the suppliers/bidders shall have to get themselves registered with <https://eproc.punjab.gov.in> and get user ID and password Class three Digital signatures is mandatory to participate in the e-tender process. For any clarification/difficulty regarding e-tendering process flow, please contact us on 0172-2791326 and 0172-2791226 & email.
2. All bids (both Technical and Financial) should be uploaded in E-procurement portal(<https://eproc.punjab.gov.in>) .No manual bids will be accepted.
3. The tender document fee, Tender Processing Fee and EMD as mentioned in table at page no. 2 of tender document should be deposited /pay by online mode (Net Banking,NEFT/RTGS) only. No other modes will be accepted.
4. Corrigendum/Addendum/Corrections/notice, if any will be published on the website NIC & I.K.G. PTU website.Bidders are advised to visit web page and update themselves. Corrigendum/addendum are the part of tender documents and bidder are supposed to upload the same, duly signed as per guidelines given in tender document.
5. Bids must be submitted online through <https://eproc.punjab.gov.in> before the time specified in the above table (as per system clock). Department/Service provider does not take any responsibility for the delay caused due to non availability of internet connection or net work traffic for online bids.

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6. Bidders shall upload scanned copy of all the papers i.e. proof of Earnest Money, Tender Form Fee, PAN Card, GST No. and other documents mentioned in the subsequent pages.
7. Uploaded documents of valid successful bidders may be verified with the original documents. The valid successful bidder has to provide the originals to the concerned authority on receipt of such letter, which will be sent through registered post/e-mail.
8. Bid(s) once submitted online, can be resubmitted before last date and time of submission.
9. Prospective Vendors are advised to start uploading process well on time and not leave it to the last minute as same shall take time because of the data involved.
10. If the date of opening of tenders happens to be a public holiday, then the tenders will be opened on next working day at the same time and place.

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1. INTRODUCTION

1.1. About I.K. Gujral Punjab Technical University

I.K. Gujral Punjab Technical University (I.K.G. PTU) was established by an Act of State Legislature on 16th January, 1997, to promote technical, management and pharmaceutical education in the state at degree level and above. It was established as Punjab Technical University and renamed as I.K.Gujral Punjab Technical University by State Government in the honour of Late Sh. Inder Kumar Gujral, Former Prime Minister of India, in 2015. The University has the mandate to set up centres of excellence in emerging technologies and for promoting training, research and development in these areas. The University has undertaken the task of training students to help in the development of skilled manpower in this sector in the country in general and in the state in particular. With this goal in mind, the university is promoting a number of courses in different streams in regular as well as distance education programmes. At present University have 121 AICTE and 65 UGC Colleges affiliated with it. I.K.G. PTU is undertaking and supervising the instructions and award of 30+ bachelor's degrees in Engineering & Technology & 20+ in non-AICTE & UGC courses. The University has a land area of 78.16 acres & it owns more than 10 campuses throughout the state of Punjab.

University started its journey with 09 Engineering & 05 Management colleges. I.K.G. PTU has its own learning centers under Distance Education Programme. The University has a rich strength of lakhs of students, which also includes 1,500+ international students from 30+ countries.

I.K.Gujral Punjab Technical University (I.K.G. PTU) has bagged the much coveted Best Technical University Award for the year 2013. The Award, instituted by Indian Society for Technical Education (ISTE) and Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar, encourages technical universities to enhance their performance and to serve the community as well as stakeholders by improving quality and maintaining the standard of the programs offered. Earlier, University had bagged an award in the "Best University Promoting High Quality Research at Master's and Doctoral Thesis Work" category in the CCI Technology Education Excellence Awards 2013. This award was instituted by a Consortium of Co-Chairpersons-Industry (CCI) of Gujarat Technological University (GTU), jointly with the Communication Multimedia and Infrastructure Association of India (CMAI) .

I.K.G. PTU has also been conferred upon eINDIA 2010 Award of the Year as "ICT Enabled University of the Year" and "Open and Distance Learning Initiative of the Year Award" by the Ministry of Information and Communication Technology, Govt. of India, at Hyderabad on August 5, 2010. I.K.G. PTU is offering a number of schemes for students like SC/ST welfare schemes, in which no fee is to be paid by the SC/ST students, and also is successfully executing the schemes of Punjab Government. The university also offers free schemes for needy & scholar students. It also offers various scholarship schemes like GATE Scholarship, JRF and SRF scholarships, UGC/NET Schemes and Scholarships, research grants, research and development.

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1.2. On Screen Marking of Answer Books (OSM) – Benefits to Stakeholders

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

Stakeholder	Benefits
Students	On time processing and delivery of exam results
Colleges	Online and on time publication of student results
Faculties	Instant access of student data, online evaluation of Answer Script (AS), option for comments and feedback while evaluating the AS and payment system for online evaluation
Exam Section	Work Flow mechanism with AS evaluation, final result processing, option for online moderation & scientific analysis of exam results and MIS reports / dashboard for instant decision making
University	Online status update with all stakeholders, 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 evaluation process

1.3. Consortium

Consortium of upto 2 parties is permitted with following conditions:

1. One party shall be termed as Primary bidder and the second shall be Secondary bidder.
2. A Consortium agreement shall be submitted along with Tender Application defining the roles of both parties along with their company registration details.
3. The Consortium agreement must define only one of the above two parties as Single Point of Contact who will sign the agreement with the client, receive payments and coordinate for all purposes.
4. The qualification criteria are to be met by the Primary bidder only.

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5. For the purpose of scoring marks in the technical bid, credentials of both the parties shall be considered.

2. OVERALL SCOPE OF WORK

2.1. General Scope for OSM Services

The University conducts its exams on semester basis and processes around 6-7 Lakh answer books in each exam. However, of the November-December 2018 examination approx. 50,000 answer books will be covered under this technology of On Screen Marking and shall be scaled up only after its successful implementation by the bidder. The figures given above are tentative and may vary to an extent of 25% either way.

The proposed OSM solution for the University would involve implementation, operations and maintenance services to automate the Examination processes of the University for Secured Scanning of AS, Onscreen Marking of AS and Handing over of reports.

The Bidder 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 TENDER. 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 TENDER.

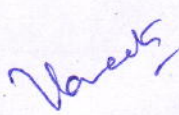
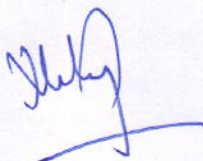
1. Implementation of a robust Application Software for handling the proposed Onscreen Marking System configurable to the University requirements with necessary system applications and utility tools.
2. Handling of Complete Project Management of the proposed OSM solution.
3. Setting up of required Computer Hardware such as servers, desktops, scanners etc along with required networking infrastructure at the scanning Centre.
4. Providing Managed services support in a distributed environment covering the affiliated colleges, evaluation centres etc to ensure optimal performance.

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5. 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 and faculties etc.
6. The proposed solution should have the ability to seamlessly integrate and function across various devices such as desktops and, laptops
7. The proposed OSM 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 evaluation process.

2.2 IT infrastructure and Services

1. All required IT infrastructure will be installed and managed by the Bidder. Some of the indicative IT infrastructures are given below and it's the responsibility of the Bidder to deploy the IT infrastructure as deemed fit to ensure "the scope of services" as per the TENDER is delivered:
 - a. Suitable and required number of Computer Servers, desktop computers, networking, storage and system utility tools should be installed in the University campus to act as Nodal centre (NC) connecting the University with any no. of different locations/colleges for the Onscreen Marking System during the evaluation cycle.
 - b. Required systems, scanning facility and system utility tools should be installed by the Bidder at University campus for AS scanning and to enable distributed evaluation by registered faculties.
 - c. Required Standard Operating Procedures (SoP) should be put in place by the bidder to continually maintain the said project with 100 % uptime
 - d. Required software application module should ensure 100% compliance to the evaluation life cycle for the distributed services such as Scanning Operations, Digital Evaluation, etc.
 - e. Suitable technical Help desk should be installed by the Bidder to provide both voice based (English and local language) and system based support
2. The University shall provide the following facilities and approvals to the Bidder without any cost consideration and on time to implement the said project flawlessly:

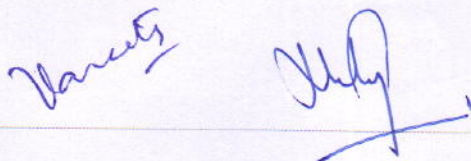
- a. Sufficient space in the University to set up Nodal Centre for scanning the AS and enabling distributed evaluation. The facilities provided will have suitable power, back-up power, internet bandwidth along with redundancy as per the specifications given by the Bidder and additionally Air conditioners in the NC and scanning centres
- b. University shall provide the necessary computer labs in Evaluation Centres with required number of computers for conducting of evaluation of answer scripts. All such facilities shall have suitable power, back-up power and internet bandwidth along with redundancy as per the specifications given by the Bidder to conduct evaluation online.
- c. Faculties, examiners, officials and support staff to manage the academic part of the OSM project such as scanning and evaluation etc.
- d. Adequate number of evaluators and moderators of every subject for the purpose of evaluation will be nominated and paid for by I.K.G. PTU.
- e. Data of the faculties, colleges and other relevant data in electronic format and duly validated by the office of the CoE should be given to the Bidder to be uploaded into the system.
- f. Course details, Exam schedule, Attendance details will be provided in electronic format duly validated by the office of the CoE.
- g. 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 OSM project will be undertaken by the Bidder.

2.3 Obligations

The following obligations are to be delivered by respective party

1. Client

- a. Provide adequate space and power supply to the bidder to setup the complete infrastructure for complete process of on-screen marking
- b. Provide answer sheets as per requirement of On Screen Marking
- c. Provide details and data of evaluators for sheet allotment



- d. Provide Hardware and Internet bandwidth after the process of digitization of Answer sheets

2. Bidder

- a. Provide complete Software for scanning, digitization, distribution, evaluation and result tabulation
- b. Provide all equipment required for coding, scanning and digitization
- c. Provide all manpower for scanning, digitization, training of software and MIS
- d. Depute dedicated Project Manager and onsite Project Coordinator, Training Manager and Supervisor who are on rolls of the bidder.
- e. Setup call centre to assist evaluators in English and Punjabi

2.4 Managed Application Services (MAS)

The complete OSM project management and operation should be delivered as managed services as per the scope of work with full responsibility and accountability of the IT administration by the Bidder leaving the academic part of the project with the University. Under no circumstances the Bidder shall have access to the academic data of the proposed OSM project such as mark details etc. and the Bidder shall ensure the proposed system is built based on this specific requirement of the University. It should be clearly understood that the Bidder 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.

2.5. Duration

The initial duration of the contract shall be for six months extendable up to 3 years on basis of semester wise performance.

2.6. The proposed locations of the project:

The proposed OSM 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 Onscreen Marking System.
2. The Evaluation locations - The Evaluation of digitized answer booklets shall be "completely on computer screen" viz., Distributed mode. Under distributed evaluation the evaluators can use systems to carry out the

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evaluation by connecting to the bidder's server/ Data Centre hosting the OSM solution and the digitized AS. However if required the University may identify few evaluation centres amongst their 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 specifications given by the Bidder. The mode of evaluation shall be decided in consultation with the Bidder in the best interest of the University.

2.7 Financing model of the project

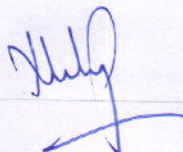
1. The entire project along with required IT infrastructure, application software and related system utility tools shall be installed by the Bidder at his own cost as deemed appropriate to deliver the "scope of services" as mandated by the University.
2. The University shall not pay for any of the above IT infrastructural facilities that will be installed by the Bidder but will pay the Bidder based on the number of AS evaluated using the proposed OSM 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 Bidder but for the services delivered by the Bidder as per the scope of services in the tender.
3. The payments shall be made for every exam cycle based on the above deliverables by the Bidder and as per the commercial terms agreed by both the parties.

2.8. Governing Law and Jurisdiction

All disputes will be settled within the jurisdiction of the Head Quarters of Registrar, I.K.G. PTU Kapurthala.

2.9. 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 7days to set up the project and "go live" for the evaluation cycle under consideration. Normally exams are conducted twice during the year and the Bidder shall ensure timely deployment of the project as in clause 2.2(1) 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(2) above

2.10. Training & Support

The successful bidder shall provide training on the usage of the software to all stake holders viz., office of the CoE, faculties etc 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 local Language) before the project goes live and demonstrate the same to the office of the CoE

2.11. Point of Contact

The Bidder 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 Bidder should communicate the same to the COE office of the University.

Name:

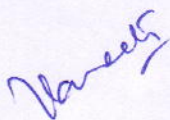
Designation:

Phone No:

E-mail ID:

2.12. Other Important guidelines for OSM Services:

- a) The system must employ a framework that ensures the most efficient processing time.
- b) The system must provide for real time, live reporting of scoring progress and accurate time projections for reporting of results.
- c) Data resulting from system should be compatible reliable data management system
- d) 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 SOP document for the scope of services before implementing the project and get the same signed by the University in order to agree on the deliverables mutually.

The functional requirement of the complete process is that the bidder must have complete working solution with software, hardware & necessary equipment to execute all steps involved in on-screen marking; that includes but not limited to receiving / stacking, coding, punching, cutting, scanning, digitizing, uploading, distribution of answers sheets and tabulation of marks awarded by the evaluators. The process also involves integration of database of evaluators with software intelligence, rules of allotment, question paper fragmentation, data management and management information systems and retrieval of images and records.

3.1. Digital Scanning:

1. The approximate volume of work is scanning and e-evaluation of approximately 50,000 answer books for Nov/Dec-2018 session and may scale up depending upon the performance for next sessions.
2. The answer book consists of 32 cross ruled pages plus 4 title pages (total 36 pages) with first title page is the OMR sheet duly stitched together with portrait orientation. Paper of OMR sheet is 100GSM and subsequent pages are of 70GSM and size of answer booklet is 8.5 x 10.5 inches.
3. A unique 1D bar code (Barcode Standard: Code 128) is printed on OMR sheet / on all pages of answer books.
4. The scanning of answer books must be started as soon as possible after the issuance of supply order so that desired work will be completed within stipulated time as per schedule provided by the CoE/user department. Place of scanning work will be I.K.G. PTU Campus, Jalandhar- Kapurthala Highway. The University will provide physical infrastructure like tables, chairs, ACs, power, internet and sufficient space for scanning activity. All machinery and manpower for scanning & uploading scripts will be provided by the firm(s). The firm must maintain a good scanning rate to ensure timely scanning of answer books. The entire scanning centre will be monitored using CCTV cameras and all the activities at the centre will be recorded using a DVR by the firm as well as I.K.G. PTU.
5. The answer books will be provided to the firm in the form of packets/bundles according to a defined series by the user department. The firm (s) must maintain

records at every stage of scanning process and provide audit trails as and when asked for.

6. The scripts of answer books are not allowed to move out of scanning premises. The data between scanning and data/evaluation centre should flow in encrypted manner. Copying the scripts and transporting them to evaluation centers are strictly not allowed. Stapling of answer books is the responsibility of the firm(s) if scanned after cutting or the bidder to quote separate rate for scanning of Answer sheet without its cutting. The firm(s) should handover the answer books in the same order as they receive from I.K.G. PTU.

3.2. E-Evaluation

1. A master database should be created to manage college, course / semester subject wise information and evaluator's information by the University.
2. Allocating specific subject to specific examiners, expert in the respective subject.
3. To securely transmit, download scanned answer scripts from Bidder's data centre to evaluation centres
4. The Onscreen Marking should be made user friendly with Answer Script, Question paper, Scheme and marks entry to be provided on screen in single window.
5. Provision of Multiple Digital Valuation shall be provided for the same script by different evaluators.
6. The decoding of the specified answer scripts shall be made available for results /moderation / re-evaluation as desired by I.K.G. PTU.
7. Randomization of scripts: The answer script shall not be evaluated and or reevaluated twice by the same evaluator unless it is specified as per the regulations of I.K.G. PTU.
8. Provision to provide soft copy of the answer copies along-with marks entry to the students under RTI / Court matter or any other purpose as desired by I.K.G. PTU.
9. Option for archival of digitally evaluated answer books for a period of Six months after declaration of result and to provide the same data / information stored in a memory device as per the requirement of I.K.G. PTU.
10. Providing suitable authentication using login id and password to the evaluators. Provision of the unique password at each login should be there.
11. Provision for report generation and transfer of Data as desired by I.K.G. PTU as per the format mutually agreed between the Bidder and I.K.G. PTU.
12. Suitable security measures should be put in place to ensure secured and reliable evaluation process.
13. System should be reliable and provide dynamic tools to monitor and control the OSM process by:
 - a. Assuring anonymity of test-taker to achieve maximum credibility.
 - b. Flexibility to examiners by enabling Digital Valuation of answer scripts from any evaluation center in a secure manner.

