TATA

Technical Bid Submission
For
Empanelment to conduct online examinations for different departments of Uttar Pradesh

eBid Reference no. GoUP_Online_Exam_2018
Date : 09 March 2018

TCS iON

Table of Content

Sr. No.	Description	Page No.
1	Forwarding Letter	3
2	Authorization Letter	4
3	DD's Scan Copy	5
4	Technical Solution Document	6
5	Certificate of Incorporation	55
6	PAN CARD	58
7	CA Certificate for Company's Annual Turnover	59
8	Audited Balance Sheet and Profit & Loss Statement for positive net worth	61
9	HR Declaration	63
10	GST Registration certificate	64
11	Annexure-II (Eligibility Criteria Point 8)	65
12	Annexure-B (Eligibility Criteria Point 9)	90
13	Source Code Declaration	103
14	TCS integrated Quality Management System	104
15	TCS Configuration Management	108
16	Data Center Declaration	112
17	Data Center Certificates	113
18	Cert-in Certificate	116
19	ISO Certificates	118
20	CMMI Level 5 Certificates	143
21	Anti- Blacklisting Affidavit	145
22	Power of Attorney (Authorization of Bidders' Signatory)	146
23	Nodes Infrastructure Declaration	154
24	Annexure-I	155
25	Annexure-III	156
26	RFP Document	158
27	Corrigendums	200
28	Draft Agreement template	245

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Forwarding Letter

Dated: 22nd March 2018

To,
The Managing Director,
UPDESCO,
Uptron Building,
Gomti Nagar, Lucknow

Dear Sir,

Subject: Request for Proposal for eBid Reference: UPDESCO_GoUP_Online_EXAM_2018 dated 09 March 2018

We, at Tata Consultancy Services Ltd (TCS) are pleased to be offered an opportunity to submit our profile for the invitation to bid to provide assistance for selection of firms for empanelment to conduct online examinations for different departments of Uttar Pradesh. We will ensure to provide related services to your esteemed organization for the purpose of acting as technical support and executing agency with regard to the scope of the RFP.

We hereby submit the following details and documents as per the requirement of RFP:

a) Earnest Money Deposit- Rs. 5,00,000/-
b) e-Bid processing fee- Rs. 59,000/-
c) Detailed Solution Document
d) Experience Certificates / PO Copies
e) Employees Strength
f) Self-Declarations
g) Infrastructure Capabilities

We are looking forward to a long-term association with Uttar Pradesh Development Systems Corporation Limited (UPDESCO), Lucknow. We thank you for considering our bid response submission.

Thanking You,

Yours sincerely,

For Tata Consultancy Services Limited

Venguswamy Ramaswamy
Global Head- TCS iON

TATA CONSULTANCY SERVICES LTD. MUMBAI

TATA CONSULTANCY SERVICES
Tata Consultancy Services Limited
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Registered Office 9th Floor Nirmal Building Nariman Point Mumbai 400 021
Corporate Identification No. (CIN): L22210MH1995PLC084781

Dated: 22nd March, 2018

TO WHOMSOEVER IT MAY CONCERN

Ms. Deepali Saxena (Employee ID: 1400209) Email ID: deepali.saxena@tcs.com Contact No.: +91 8707721623 from Tata Consultancy Services Limited (TCS), working as TCS iON Regional Sales Manager and based out of Lucknow, India would be representing TCS in all the activities related to the bid for Uttar Pradesh Development System Corporations Ltd.

This authorization is valid only for the purpose of representation of TCS in submission of documents, pre-bid and post-bid activities for this tender including the negotiations with Uttar Pradesh Development System Corporations Ltd.

For Tata Consultancy Services Limited

Venguswamy Ramaswamy
Global Head – TCS iON

TATA CONSULTANCY SERVICES LTD. MUMBAI

TATA CONSULTANCY SERVICES

Tata Consultancy Services Limited
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Tel 91 22 6778 6565 Fax 91 22 6778 6500 e-mail corporate.office@tcs.com website www.tcs.com
Registered Office 9th Floor Nirmal Building Nariman Point Mumbai 400 021
Corporate Identification No. (CIN): L22210MH1995PLC084781

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Key: SUKFOY
Sr. No: 805326

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Key: NEDJOW
Sr. No: 301698

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AUTHORISED SIGNATORY BRANCH MANAGER
Gurvinder Singh
S 23746

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TATA CONSULTANCY SERVICES LTD. MUMBAI

TATA

TCS Technical Proposal

iON Digital Assessment

For

Uttar Pradesh Development Systems Corporation Ltd. (UPDESCO)

eBid Reference: GoUP_Online_Exam_2018 date: 09 March 2018

Selection of Firms for Empanelment to Conduct Online Examinations for Different Departments of Uttar Pradesh

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Table of Content

1. Executive Summary 4

1.1 About Uttar Pradesh Development Systems Corporation Ltd. 4

1.2 About TCS iON 4

2. TCS Understanding of Requirement from UPDESCO 6

2.1 Scope of work and TCS Understanding 6

2.2 Essential Pre-requisites 21

2.3 Technical Evaluation Criteria 25

2.3.1 As per Clause 2; page 22: Technical Evaluation Criteria 25

2.3.2 Annexure V- QCBS: Technical Evaluation Criteria 26

2.3.3 Annexure V- L-1: Technical Evaluation Criteria 28

3. iON Digital Assessment Scope Coverage 31

3.1 Scope of Engagement 31

3.2 Functional Scope 32

4. iON Digital Assessment Solution 36

4.1 Solution Features 36

4.2 About iON Digital Assessment Solution 36

4.3 iON Digital Assessment Solution Architecture 37

4.4 iON Digital Assessment Solution Highlights 38

4.5 iON Digital Assessment Solution Unique Features 38

4.6 iON Digital Assessment Process 39

4.7 Information Security 39

4.8 Business Continuity & Disaster Recovery 42

5. Service Delivery Methodology (Operations) 45

5.1 Standard Operating Procedures (SOP) 45

5.2 Helpdesk Support 46

6. Value Proposition 47

6.1 Business Value Proposition 47

6.2 Solution Value Proposition 47

6.3 Organization Value Proposition 48

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1. Executive Summary

1.1 About Uttar Pradesh Development Systems Corporation Ltd.

UPDESCO is a premier Public Sector Undertaking of Government of Uttar Pradesh (GoUP). It was set-up in March, 1977 under the administrative control of Planning Department. In 1999, it was brought under the Department of Information Technology & Electronics (IT&E), GoUP. UPDESCO provides system's back-up to Government and Non-Government Organizations (NGOs). It identifies and estimates the magnitude of problems and suggests the best possible method of improvement. Information Technology (IT) and IT enabled Services (ITeS) are the core strength of this Public Sector Undertaking (PSU). UPDESCO is a State Nodal Agency for providing services related to IT and ITeS. Its domain ranges from procurement and supply of Computer Hardware, Software, Training, Consultancy and Human Resources. UPDESCO is a State Registrar for Aadhaar (UIDAI), Government of India (GoI) for 36 districts of UP.

UPDESCO is looking for a technology partner for a robust system for conducting Online and Offline examinations across different departments of the Government in Uttar Pradesh. UPDESCO on behalf of Government of Uttar Pradesh has invited bids for "Selection of Firms for Empanelment to Conduct Various Examinations for Different Departments of Uttar Pradesh".

1.2 About TCS iON

TCS iON is a strategic business unit of Tata Consultancy Services focused on enabling institutions, government departments and organisations from multiple industry sectors to be efficient in their recruitment/admissions process, learning and skilling and overall business operations with the use of Phygital platforms; platforms that overlay digital technologies over physical assets.

We deliver this with a unique IT-as-a-Service model that provides easy-to-use, secured, integrated, and hosted solutions in a build-as-you-grow and pay-as-you-use business model. We serve our clients with the help of best practices gained through TCS' global experience, deep domestic market exposure along with industry leading technology expertise.

The following proposal compiles key features and benefits of iON Digital Assessment solution and describes how TCS will deliver the business values to UPDESCO.

Section 1 of the document covers the Executive Summary.
Section 2 of the document covers the Scope of Work as specified by UPDESCO and Essential Pre-requisites as required by UPDESCO along with TCS understanding.
Section 3 of the document covers the scope coverage of iON Digital Assessment solution along with Functional Scope.
Section 4 of the document covers the details of the iON Digital Assessment Solution.
Section 5 of the document covers the Service Delivery Methodology.
Section 6 covers the Value Proposition offered by iON Digital Assessment.

TCS iON is keen to work with UPDESCO to set a high bar, benchmark and plan for the future needs of UPDESCO, while resolving operational complexities of today.

TCS SMB's key differentiators for UPDESCO are as follows:

Assessment-as-a-Service – A Solution Bundle that is Fit-for-Purpose

Assessment-as-a-Service has been built with a strong set of active inputs from Exam Governing Bodies. iON Digital Assessment provides End-to-End Assessment services including Application

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Management, Allocation Management, Item Management, Assessment Management, Evaluation Management, Results Management, Certificate Management and Support Services.

Assessment-as-a-Service – Neutral and Proven Assessment Delivery Credentials
TCS iON Digital Assessment has successfully conducted digital assessments for Railway Recruitment Board (RRB) NTPC Exam 2017, 2016, 2015, Promotional cum Recruitment Exams for various nationalized Banks including SBI, Recruitment of LIC, etc. through Institute of Banking Personnel Selection (2017, 2016, 2015, 2014, 2013, 2012), Graduate Aptitude test in Engineering (GATE 2017), GATE 2016, GATE 2015, GATE 2014, GATE 2013, Joint Entrance Exam (JEE - Main) 2017, JEE (Main) 2016, JEE (Main) 2015, JEE (Main) 2014, JEE (Main) 2013, AIEEE 2012, All India Institute of Medical Sciences (AIIMS) UG (MBBS) & PG Entrance Exams 2017, 2016, 2015, AIIMS Recruitment Exams 2017, 2016, 2015, 2014, Common Admission Test (CAT 2016), CAT 2015, CAT 2014, Common Law Admission Test (CLAT 2017), CLAT 2015, JIPMER MBBS Entrance Exam 2017, 2016, 2015, JIPMER PG Entrance Exams 2017, 2016, 2015, 2014, Railway Recruitment Board (RRB 2015), Recruitment Exam for PWD Candidates- RRB Ahmedabad 2015, Union Public Service Commission, Rajasthan Public Service Commission, Maharashtra Public Service Commission, Chhattisgarh Public Service Commission, Odisha Public Service Commission, Christian Medical College (CMC) Vellore & Ludhiana, Gautam Buddh Technical University, Chennai Metro Rail Limited, Lucknow Metro Rail Corp., UP Jal Nigam, UP Power Corporation Limited, Allahabad High Court, Board of Revenue (Lucknow), etc.

TCS iON Digital Assessment has successfully assessed more than 100 million candidates overall, which includes assessing more than 3,00,00,000 candidates in the past one year.

TCS iON Digital Assessment has successfully conducted the world's largest single session exam with 1.92 Lakh candidates and Offline (OMR-based) exam with 26 Lakh candidates in a single day.

TCS iON Assessment – A Patented Solution for Assessments (IPR#3711/MUM/2012)

TCS iON Assessment is a patented solution that enables delivery of a standardized, yet unique question paper to each candidate. The solution is built on a scalable architecture performance-tested up to 1 Million candidates to take the test simultaneously, across distributed examination centers and is secured by 256 bit AES security encryption.

The solution is scalable and provides completes traceability of the entire test process through real-time sophisticated analytics. Through an automated due diligence process the infrastructure readiness is established prior to the test.

TCS would be keen to leverage our unique IT-as-a-Service model, coupled with the iON Digital Assessment Platform Solution. TCS looks forward to this opportunity to collaborate with UPDESCO and help set goal posts into the future.

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2. TCS Understanding of Requirement from UPDESCO

2.1 Scope of work and TCS Understanding

UPDESCO invites agencies who can take responsibility to conduct online examinations for various departments in the State. The scope of work will include but not limited to carrying out all activities of pre examination, examination and post examination phase as per requirement of various departments of Uttar Pradesh. GoUP is looking for an end to end Examination Solution/ Platform where multiple exams can be conducted simultaneously by different departments. The selected agencies are expected to take responsibility of entire examination lifecycle with highest level of integrity, security and meticulously perform in a professional way. Agency shall adhere to following scope:

Scope of Work for Online (Computer Based) Examination

The scope will involve design, develop and implement online services for all activities related to the entire examination process. The Examination Solution/Platform needs to have the following functionalities:

SN	Scope	TCS Response
1.	Examination Solution/ Platform provided by selected bidder shall have the sole responsibility to design, develop and implement online services for all activities related to the entire examination process. The Examination Solution/ Platform must have following functionality: • Online Application and Registration module • Online Admit Card Generation Module • Examination Creation/ Examination Calendar Module • Call Center/FAQ/Query Handling Module • Examination Centers Management and Control Module • Controller of Examination Module • Administrative Modules at different level like (HO, ZO, RO etc.) • Question Bank Module • Online Application Registrations Module • Eligibility Checking Module • Online Payments Module • Honorarium/Payment Module • Bank Reconciliation Module • Examination Centre Allocation & Scheduling Module • Online Attendance Module • Mock Exam Module • Evaluation Module • Result Generation and Verification Module	Supported by iON Digital Assessment iON Digital Assessment supports receipt of online application and candidate registration for examination using iON Application Management Module of iON Digital Assessment. This module enables automated eligibility check based on the rules/ parameters specified by UPDESCO. Online payment gateway can be integrated to iON Application Management for receipt of examination fees. UPDESCO can provide the guidelines for Honorarium payment which can be configured in Application Management. The application fees will be transferred to the bank account provided by UPDESCO and it supports bank reconciliation. After successful submission of the online application, based on the candidate count and city preference (if any) given by the candidate, exam center will be identified/ created using iON Allocation Management of iON Digital Assessment. This module supports exam center management, exam scheduling, candidate to exam center allocation and Online admit card generation.

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	• Certificate Generation and Verification Module: Certificate generation for internal authorization and authentication purposes • MIS and Report Generation Module • Resource Management	iON Content Authoring Engine can be leveraged for creating Question Paper/ Question Bank which can be used for conducting the examination. iON Command Center facility can be leveraged to authorised personnel from UPDESCO and TCS for keeping track of progress in various pre, during and post exam activities. During examination, attendance of the candidate will be captured on the attendance sheet. The present and absent candidate details can be monitored through iON Command Center post user authentication. Static mock test link with dummy question paper can be created and posted on UPDESCO website for candidates to get familiar with the system. iON Result Management module supports result generation based on the correct answer key provided. Various types of reports can be generated based on pre-designed reports template. Solution also supports generation of reports as per required customised template which need to be mutually agreed between TCS and UPDESCO. Based on the final result online certificate can be provided to candidates. This requirement need to be discussed and mutually agreed between TCS and UPDESCO. Helpdesk support will be provided with email, SMS and Telephonic support as per mutually agreed timelines.

The above table depicts TCS understanding and response in brief for scope of work from UPDESCO. The detailed scope of the online (CBT) exam is divided into three broad phases, viz., Pre-Examination Phase, Examination Phase and Post Examination Phase. The following table details TCS understanding and response against the scope of work drafted by UPDESCO:

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SN	Scope	TCS Response
1.1.1 Pre-examination Phase		
a)	The bidder has to design a separate website for receiving the online applications.	Supported by iON Digital Assessment TCS will create a separate web portal for receiving online applications from candidates. iON Application Management can be leveraged to register candidates and to receive online application from candidates. The online application form will be created as per UPDESCO requirements. TCS would share an application form requirement template with UPDESCO. This would capture the form details, form fields, required validations, rules, etc. TCS would request UPDESCO to share the signed off requirements based on which the application form will be developed. The timeline for deployment of online application form will be discussed and mutually agreed upon by UPDESCO and TCS. The online applications will be hosted on TCS Data Center and application link will be given to UPDESCO which can be displayed on UPDESCO website or any other separate website designed. iON Application Management can be integrated with multiple secured Payment Gateway Service Providers, thereby maintaining shorter timelines to launch an application for a new post. List of Payment Gateways that can be integrated: 1. Axis Bank 2. TechPro 3. CCAvenue 4. Bank of Baroda 5. HDFC 6. BillDesk 7. Easy2Pay 8. payU 9. EBS 10. Citrus 11. IOB 12. Times of Money 13. FeeCounter 14. IOB Netbanking If UPDESCO opts for other payment gateways apart from the list, the same can be implemented in 4 weeks. (Dependency on the agreement
b)	The Bidder should design the application for candidates to register themselves for the Computer Based Examination. Bidder would require to integrate online payment gateway with advised vendors. The bidder has to inform candidate about rejection of the application.	

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		between UPDESCO and payment gateway service provider). For the rejected applications, the reason for rejection will be communicated to the candidates.
c)	The Bidder should make provisions for admit card download. The candidate should be able to download and take a printout of the successfully filled applications.	Supported by iON Digital Assessment After successful registration, each candidate will be provided with unique login ID and password using which they can log in to the application link and access the filled in application form. Also, they will be able to download the filled in form and take print out of the same. iON Allocation Management will be leveraged for admit card generation meeting the requirements finalised after mutual agreement between UPDESCO and TCS. TCS will share the sample admit card and request UPDESCO authorized personnel to provide a sign off on the same. Post receiving the sign off, the admit cards will be generated and uploaded to a link and will be available for candidates to download & print after logging in with unique login credentials. Candidates will be able to download e-admit cards as per timelines mutually agreed by UPDESCO and TCS.
d)	The Bidder is expected to draw the examination plan and design the examination processes as follows:	Supported by iON Digital Assessment Process TCS has a well-defined Standard Operating Procedures (SOP), which includes all processes starting from a Project Start-up Meeting (post the receipt of Purchase Order) till the Project Wind up Meeting (post publishing the results, analytics). Detailed SOP will be shared with UPDESCO's authorised personnel. A designated project manager will work closely with UPDESCO to document and implement a project plan which will consist of key milestones and related activities.
	(a) Complete Security management processes • Physical Security((The objective of physical security is to safeguard personnel, information, equipment, IT infrastructure, CCTV, facilities and any other assets at the examination center and other	Supported by iON Digital Assessment Process Security guards will be deployed at each test center for physical security. Trained volunteers will be deployed at the gate to verify candidates' admit card and ID proof. Only verified candidates will be allowed to enter the test center premises.

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	strategic places.) The client department shall seek support from district administration for sufficient security arrangement. • Information Security • Server Security • Network Security	During exam, candidates will be escorted to and from the washroom. 256 bit encrypted and password protected Question Paper bundle is uploaded through VPN tunnel to TCS Data center and downloaded from TCS Data Center to every Test Center's Assessment Server. 128 bit encrypted Results are uploaded from every Test Center's Assessment Server to TCS Data Center. MD5 Hash algorithm is implemented to ensure that the results data is safe and securely transmitted from every Test Center's Assessment server to TCS Data Center. RSA algorithm based result sharing ensures only authorised party has access to the results. It also ensures there is no data loss during data transmission. Assessment servers have a standard operating environment. All servers are whitelisted and time hardened. Network audit is conducted in every test center to ensure that no other application shall be made available other than the Test Delivery application in each candidate's computer system on the day of examination during the course of examination. Netboot, an in-house developed OS, is used as the OS for all candidate machines. All candidate systems will be started based on the OS image rendered from the local assessment's test centre server. This takes care of blocking attempted malpractices like changing system date, internet access, remote access etc. Examination server would not be connected to computer systems other than the ones to be used in exam.
	(b) Candidate handling process • Mapping of candidates details with Exam Centers • Validation and verification of identity • Attendance and biometric (photograph and thumb impression) handling • Machine/seat allocation and handling of security parameters • Bulk/individualized SMS • Bulk/individualized emails	Supported by iON Digital Assessment Process TCS will finalize the test centers in each city as per the capacity required by UPDESCO and will share the details with authorized personnel of UPDESCO as per the agreed timelines. iON Allocation Management can be leveraged for examination center allocation to the candidates. The candidates will be allocated to the test centers based on the allocation logic shared by UPDESCO. The same will be discussed and will be mutually agreed between UPDESCO and TCS.

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	• Customer care number for responding to queries	At the entrance, the candidates will be verified against the photograph printed on the Admit Card and also valid photo ID proof. TCS will ensure that the registration process is uniformly followed across all test centers. TCS iON will provide all necessary manpower, hardware and software to register candidates by capturing their biometric finger print before and digital photo prior to appearing for the test at the examination centres. Attendance of candidates will be captured at each test center. Each candidate will be assigned a machine for exam (and seat) and own login credentials. 256 bit encrypted and dual password protected Question Paper bundle is downloaded from TCS Data Center to every Test Center's Assessment Server. 128 bit encrypted Results are uploaded from every Test Center's Assessment Server to TCS Data Center. TCS will send SMS and e-mail notifications at various stages to the candidates to their registered mobile number and e-mail id. Helpdesk (Email, SMS & Tele-support) will be made available to extend support for candidates as per the terms and requirement mutually discussed and finalised by UPDESCO and TCS.
	(c) Any other processes related to conduct of Examination.	TCS and UPDESCO will discuss and mutually agree on any other process to be followed during conduct of examination
e)	The Bidder shall prepare and provide Standard Operating Procedure (SOP) for all processes for safe and secure conduct of examination along with rules for contingency and exception handling/ emergency procedures.	Supported by iON Digital Assessment Process TCS has a well-defined Standard Operating Procedures (SOP), which includes all processes starting from a Project Startup Meeting (post the receipt of Purchase Order) till the Project Wind up Meeting (post publishing the results, analytics). Detailed SOP will be shared with UPDESCO. TCS also has well-defined 'Emergency Management' and 'Business Continuity and Disaster Recovery' plan in place.
f)	The Bidder shall provide specifications for Hardware and Software required at all stages of the examination at Exam Centers including devices and systems	Supported by iON Digital Assessment process As part of Pre-exam process all relevant infrastructure requirement like Hardware and

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	to be used for authentication and audit trail mechanisms required for Exam.	other system configurations will be shared with the test centers and TCS authorized staffs will check the same. These details will also be shared with UPDESCO well in advance. This will also include details of authentication and audit trail systems.
g)	The Bidder shall provide consulting, training and manpower support to handle the entire Examination. The required Hardware, Software, networking including Internet (leased line) shall be installed by the Bidder on lease/rent basis, whose cost would be covered under the commercial bid.	Supported by iON Digital Assessment Process TCS will deploy technically qualified, experienced, adequate manpower as per the UPDESCO requirement to manage the entire examination process. Detailed in person training will be imparted to the involved manpower. iON Digital Assessment is hosted in TCS Data Center. All assessment servers will be owned by TCS. TCS will organize the test centers and ensure that all the candidate machines in all the test centers are in good working condition. TCS will deploy required hardware, software, network, UPS/power, internet and server setup at each test center.
h)	The Bidder shall inform the applicants whose application are rejected via email or other medium	For the rejected applications, the reason for rejection will be communicated to the candidates.
i)	The Bidder shall provide 7 days' time to rejected applications to upload any missing information/ document	The rejected candidates, based on their reason for rejection, can upload any missing information/ documents on the application web portal. The timelines for the same will be discussed and mutually agreed between TCS and UPDESCO.
j)	The bidder shall set minimum passing marks through application management for candidates of all categories.	Based on the minimum passing marks requirement provided by UPDESO, TCS will incorporate the same in the online application management for all the categories.
k)	The Bidder shall identify required Exam Centers as per the client department requirement in cities of Uttar Pradesh that 20% of the systems are available as backup per shift i.e. if 100 systems are going to be used, the center shall have 120 systems available per shift.	TCS would finalize the test centers in each city as per capacity required by UPDESCO/ client department in cities of Uttar Pradesh and share the details with UPDESCO as per the mutually agreed timelines between UPDESCO and TCS. As per the standard process, 10% buffer node is sufficient to conduct computer based examination. Each test center will have required infrastructure setup with adequate no. of computer nodes. Sufficient buffer nodes will be maintained in every test center. This will be further discussed and finalised after mutual agreement between UPDESCO and TCS. This

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		buffer is maintained lab wise in order to avoid candidate movement during the course of test.
l)	The Bidder shall ensure that all Exam Centers have the prescribed Hardware, Software, Internet and LAN connectivity for conducting Examination.	Supported by iON Digital Assessment Process TCS will ensure the availability of required hardware, software, networking including internet at the examination centers for smooth conduct of the examination. TCS will ensure that prior to exam, periodic audits including LANScaping will be conducted at every test center. Hardware, software, LAN and UPS/Generator will be tested to work in an uninterrupted manner during the conduct of examination.
m)	The Bidder shall ensure that UPS facilities and Generator facility are available at each Exam Centre for un-interrupted power.	Supported by iON Digital Assessment Process Power audit is done to ensure that the exam happens without any power disruption. Every center has UPS/Generator to provide power backup in the case of a power failure. Test center UPS, Genset, electricity cables & switches are checked to ensure that there should be no power problem during the course of the examination. Every center has electricians and Genset experts to handle any kind of power disruptions.
n)	The Bidder shall carry periodic audit at Exam Canters for • Hardware, Operating System, Processor Speed, RAM, Network and internet connectivity, Key Boards etc. • Software - Screen resolution, bandwidth for internet and LAN connectivity, Browser. • Working condition of UPS and Generator.	Supported by iON Digital Assessment Process TCS will ensure that prior to exam, periodic audits including LANScaping will be conducted at every test center. Hardware, software, LAN and UPS/Generator will be tested to work in an uninterrupted manner during the conduct of examination. Software - Screen resolution, bandwidth for internet and LAN connectivity, Browser will be checked during the landscaping process.
o)	The Bidder shall ensure basic amenities to be provided separately for all genders.	Supported by iON Digital Assessment Process This check is done as part of Test Center Finalization. All test centers will have adequate drinking water and toilet facilities separately for male and female candidates.
p)	The Bidder shall provide a facility to candidates for static mock link for mock test within one month of signing the contract. The same facility should also be available online to be run through web server. The mock test should be a	Supported by iON Digital Assessment process TCS would create a static mock link which will be hosted on UPDESCO website to provide facility for candidates to practice online exam. The mock

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	replica of the examination and should be prepared in consultation with the concerned department	link can be accessed by students from any location with internet connectivity. The timelines for the mock link will be mutually discussed and agreed between UPDESCO and TCS. TCS will also consult UPDESCO for preparing the mock test link.
q)	The Bidder shall provide help to candidates through a call center (telephone/email) on need basis depending upon the requirement of the examination.	Supported by iON Digital Assessment process Helpdesk (Email, SMS & Tele-support) will be made available to extend support for candidates as per the terms and requirement mutually discussed and finalised by UPDESCO and TCS.
r)	The Bidder shall host and manage the examination process through intranet based solution at Exam Centres.	Supported by iON Digital Assessment process Exam will be conducted over Local Area Network (LAN) in which the candidate machines would not require internet access. In every test center, for every 250 candidates, TCS would deploy a primary assessment server. For every primary assessment server, a backup assessment server would be deployed. Data would be backed up in backup server at regular intervals.
s)	The Bidder shall ensure proper authentication of the candidates at the center.	Supported by iON Digital Assessment process At the entrance, the candidates will be verified against the photograph printed on the Admit Card and valid photo ID proof. Only the verified candidates will be allowed to enter the exam center.
t)	The Bidder shall ensure complete registration process of the candidates (digital photo, signature, finger print etc.). The biometrics taken at this stage shall be used later on for authentication purposes.	Supported by iON Digital Assessment process TCS will ensure that the registration process is uniformly followed across all test centers. TCS will provide all necessary hardware and software to register candidates by capturing their biometric finger print, photograph and signature before appearing for the test at the examination centers. After registration process, the candidates will be guided to the pre-allotted seat/ machine. Biometrics data captured on exam day can be shared with UPDESCO and /or used for various stages later on during the admissions process.
u)	The Bidder shall ensure all the arrangements and adequacy of displays and provide required instructions/ information to the candidates appearing for exam at Exam Centers.	Supported by iON Digital Assessment Process All Test Centre would have adequate displays and instructions provided for the candidates. Test Center coordinator will ensure that the

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		required details are made available in Notice Boards / Signages which will be placed at prominent places within the Test Center. In addition Volunteers would also be appointed to guide the candidates to their test seats/labs.
v)	All pre-examination phase processes shall be carried out by the Bidder in consultation with the client departments.	TCS has a well-defined Standard Operating Procedures (SOP), which includes all processes starting from a Project Startup Meeting (post the receipt of Purchase Order) till the Project Wind up Meeting (post publishing the results, analytics). Detailed SOP will prepared in consultation with UPDESCO and the same will be shared with UPDESCO. A designated project manager will work closely with UPDESCO to document and implement a project plan which will consist of key milestones and related activities.
w)	The bidder should have all the necessary components and dependency of source code of computer based examination system in place so that any change required in any of the components of the software can be undertaken by their in-house technical team. Required skills should be made available to make necessary configuration changes	Supported by iON Digital Assessment TCS' iON Digital Assessment Solution, proposed in this Bid Response is completely owned by TCS. As part of the software ownership, TCS has all the necessary components of source code in place and possesses in-house technical skill to make the required changes to the software. As part of the software ownership, TCS owns the required test cases and regression testing code. Adequate performance / security / usability / high availability/ business continuity testing has been done to ensure scalability of the solution. Software development follows the well-defined Configuration Management Strategy attached along with the bid document. For more details, please refer to TCS' Configuration Management Strategy. TCS has an in-house Quality Assurance Group as part of Delivery Assurance Group. TCS has well defined Integrated Quality Management Process (iQMS) where the Software Development Life Cycle (SDLC) has been very well-defined. Please refer to TCS Integrated Quality Management System for brief details on TCS' iOMS process attached along with the bid document. The code repository is a controlled and secured environment. All Code additions/modifications

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		are authenticated before the changes are applied to code repository. Please refer below attached documents for more details: • **Self-Declaration- Source Code Ownership** • **TCS Integrated Quality Management System** • **TCS Configuration Management** TCS possess in-house technical capability and capacity for any required configurations into systems. TCS has adequate no. of technical and other manpower as per UPDESCO requirement. Please refer to the **HR Declaration** for the same.
x)	The bidder shall arrange first aid box at all examination centres.	TCS will ensure availability of first aid boxes at all the examination centers.
1.1.2 Examination Phase		
1.	The Bidder shall provide adequately trained manpower during examination. An indicative requirements per 100 candidates are given below: **Resource** / **Quantity** Exam Centre Administrator / 01 IT Manager / 01 Invigilators / 01 per 30 systems with a minimum of 2 in a room Support Staff / Minimum 2 per 100 students (Suitability need to be justified with centers) and locations Security Guards / Minimum 1 per 100 students (Suitability need to be justified with centers) Peons / Minimum 2 per 100 students	Supported by iON Digital Assessment Process TCS has a pool of trained manpower. Trained personnel will be available as a part of the Assessment Operations team. The team is spread across the country and will be able to support in all locations specific to UPDESCO Computer based Exam. All roles as required by the UPDESCO are available with TCS. Manpower deployment at each examination centre would be as follows: • Exam Centre Administrator: 1 per center • IT Manager: 1 per 250 nodes • Invigilators: 1 per 30 system with a minimum of 2 in a room. • Support Staff : 2 per 100 candidates • Security Guards: 1 per 100 candidates • Peons- 2 per 100 candidates
2.	The Examination shall be computer based with the questions being provided onscreen on a random basis with multiple choice answers, without any manual intervention.	Supported by iON Digital Assessment iON Digital Assessment solution supports randomization of questions as well as shuffling of options in respective questions.
3.	Sufficient time of 15-20 minutes shall be allotted before the exam for	Supported by iON Digital Assessment Process

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	providing orientation to the candidates on the structure of the exam, time limits and guidelines for answering the question papers.	Candidates will be allowed to initially login to the system, 15-20 minutes prior to the start of test and read the computer based test specific instructions. At the scheduled start time of the test, candidates will be able to view a pop up screen to start the test and candidates can click on "I am ready to begin" icon and start the test.
4.	Computer based exam software should support standard features such as automatic calculation of test score, negative marking, time left, flag questions for review, navigation to unanswered questions and prompt for submission.	Supported by iON Digital Assessment iON Digital Assessment supports features and functionalities such as automatic calculation of test scores, negative marking, display of details of candidates, detailed instruction upon login, time left, flag questions for review, marking/ unmarking of question, display of status of questions with different color and symbols, navigation to unanswered questions and prompt for submission.
5.	Required number of servers for a center must be provided by the Bidder for assured performance. Additional equivalent and suitable servers for backup and mirror services will need to be provided by the Bidder.	Supported by iON Digital Assessment process At each test center, the exam will be conducted over LAN. For every 250 candidate nodes, TCS would deploy a primary assessment server. For every primary assessment server, a backup assessment server will be deployed. Data will be backed up in backup server at regular intervals. In any case of disruption, exam can be continued seamlessly with active backup server.
6.	The Bidder shall complete registration and authentication process of the candidates before start of examination (digital photo, bio-metric finger print etc.) and after that allow candidates to appear for test at Examination Centers.	Supported by iON Digital Assessment Process. Candidates are allowed to appear for test at examination center post validation of the admit card, photograph and valid ID proof. Candidate digital photo and biometric (thumb impression) of every candidate is captured inside every lab before assigning seats.
7.	The bidder shall provide progress reports as when required to the department from every center during the examination period.	Supported by iON Digital Assessment process On the day of exam, UPDESCO authorized personnel will have access to web based iON Command center which can be used as a near real time monitoring tool to monitor pre-exam / exam / post exam activities in every test center. Since this is a web based tool, the same can be accessed from anywhere on the internet. Various progress reports for certain stages in exam cycle can also be generated as per requirement.

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8.	The Bidder shall maintain audit trails of all activities of the candidate (click by click) during the course of the examination.	Supported by iON Digital Assessment iON Digital Assessment maintains a complete audit log of each candidate's action based click made during the entire duration of the exam which can be used for RTI queries (if any) or any internal UPDESCO audit.
9.	The Bidder shall obtain candidate's feedback through online Feedback Form, after the examination is over.	Supported by iON Digital Assessment process A feedback form is available at the end of every assessment to capture candidate experience and feedback on the online (computer-based) assessment.
10.	The Bidder shall inform all candidates about the required stationery material to the candidates as per requirement of the examination and make necessary arrangements, if required.	Supported by iON Digital Assessment Trained staff deployed at the exam center will provide blank paper sheet/s to the candidates as per requirement for rough work.
11.	The Bidder shall have a contingency plan for Student management/Shifting in case of any emergency.	Supported by iON Digital Assessment Process Adequate buffer nodes will be available at lab level. This buffer is maintained lab wise in order to avoid candidate movement during the course of test. Candidate(s) can be moved to another node as soon as an issue is identified. Operations planning also ensures back up test centres are identified in cases of exigencies.
12.	The Bidder shall monitor and supervise Exam Centre activities on monitoring console to be installed by the Bidder. The data should be real time data generated from each Exam Centre during the examination.	Supported by iON Digital Assessment process On the day of exam, UPDESCO and TCS authorized personnel will have access to web based iON Command center which can be used as a near real time monitoring tool to monitor pre-exam / exam / post exam activities in every test center. Since this is a web based tool, the same can be accessed from anywhere on the internet.
13.	At the end of the exam, transfer/export of candidate response and audit trails shall be done by the Bidder on secured channel from local server to Central server of the Bidder within 4 Hour from each exam center. Other data such as attendance sheet, finger print, photograph, seating plan etc. (if any) should be sent to client department within 7 days of conclusion of each exam.	Supported by iON Digital Assessment Process As part of results upload process, TCS IT Manager at every examination center will ensure to upload the candidates' responses, audit trail and other exam data within the stipulated time as soon as all the candidates have submitted / completed the examination. 128 bit encrypted Results are uploaded from every Test Centre's Assessment Server to TCS Data Centre. MD5 Hash algorithm is

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		implemented to ensure that the results data is securely transmitted from every Test Centre's Assessment server to TCS Data Centre. Post Examination, TCS would ensure that all the confidential data including candidate responses, audit trail, etc. are transferred to UPDESCO in a safe and secured manner. Other data such as attendance sheet, biometric data, seating plan, etc. will also be securely shared with UPDESCO.
1.1.3 Post Examination Phase		
1.	The Bidder shall calculate marks obtained by each candidate as per requirement of client department	Supported by iON Digital Assessment Post the exam the answer keys will be uploaded for processing the result and then the candidate scores will be automatically calculated. In case UPDESCO/ Client department opts for creating the question paper, answer key will also needs to be generated by UPDESCO/ Client department only. If UPDESCO/ Client department requires TCS to create the question paper for the test, answer key will be created by TCS only.
2.	The candidate's responses, biometric, photograph, audit trails should be uploaded automatically from the local server to Bidder's data center in a secured manner. There should not be any traces of any data pertaining to candidate whatsoever post uploads left on the exam server.	Supported by iON Digital Assessment Process As part of results upload process, TCS IT Manager at every examination center will ensure to upload the candidates' responses, audit trail and other exam data within the stipulated time as soon as all the candidates have submitted / completed the examination. The IT manager, in presence of the IR, will delete all candidate responses, audit trails, and exam related data from the assessment server upon confirmation that all data has been successfully uploaded to the TCS data centre. 128 bit encrypted Results are uploaded from every Test Centre's Assessment Server to TCS Data Centre. MD5 Hash algorithm is implemented to ensure that the results data is securely transmitted from every Test Centre's Assessment server to TCS Data Centre. Post Examination, TCS would ensure that all the confidential data are transferred to UPDESCO in a safe and secured manner. Raw scores will be generated after the correct answer key upload. Other data such as candidate responses, attendance sheet, biometric data, photographs,
3.	The Bidder should be able to hand over the raw responses/data to client department immediately (same day for morning shift & following morning for evening shift) after the candidate's response upload from local exam server. The software should have capability to take the answer key post examination.	

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		seating plan, audit logs etc. will also be securely shared with UPDESCO.
4.	The Bidder shall provide an online facility to candidates to raise objections against the questions in the exam for a fixed time window. Post the objection time window, the Bidder will provide data of all the objections raised by candidates to client department. After resolving the objections, client department will provide the final answer keys for the question paper to the Bidder, which the Bidder will use to generate final scores.	Supported by iON Digital Assessment Post completion of the examination, TCS will support UPDESCO in inviting objections from candidates by posting/uploading the question papers and model answer key. The timeline for inviting objections will be discussed and mutually agreed between UPDESCO and TCS. As part of objection management process, candidates will be allowed to make request for raising objection online and data related to the same will be captured and shared with UPDESCO as per mutually agreed timelines for any future actions by UPDESCO. After objections have been processed and resolved, final answer key will be updated, if required, only after mutual agreement between UPDESCO and TCS. Such revised answer key can also be posted/uploaded for reference. Using such revised answer key, final scores can be generated as required.
5.	Mismatch settlement in case asked by the end client department. A signed copy of the same shall be shared by the bidder with the end client department	TCS and the client department will discuss and mutually agree to the process to be followed for mismatch settlement.
6.	In case of examination being conducted across multiple shifts for the same subject, the Bidder shall provide normalized scores based on rules agreed with client department.	Supported by iON Digital Assessment TCS iON has pre-defined set of rules as part of normalisation process for processing results of exams conducted in multiple shifts for same subject or with differential question paper sets for same subject. This can also be further discussed and rules for normalisation can be finalised after mutual agreement between UPDESCO and TCS.
7.	In addition to providing scores Bidder shall provide Merit list computed as per rules provided by client department.	Supported by iON Digital Assessment After final scores have been processed, merit lists can be generated as per rules finalised by UPDESO and TCS after mutual agreement.
8.	The Bidder shall provide documented inputs and support for handling o Candidates queries o RTI queries o Court Cases	Supported by iON Digital Assessment Process Post exam, complete and detailed audit trails can be shared with UPDESCO on a case to case basis, to handle any kind of issues related to candidate queries, press interactions, RTI queries and court cases.
	Note:	

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1.	The Bidder will have to carry/ demonstrate complete System Test Run (STR) with test data to client department before implementation the software. The Bidder should also be able to demonstrate click by click audit trail for any type of enquiry.	TCS will carry/ demonstrate the complete Test Run with test data along with Application server logs to capture all errors, warnings and exceptions that are generated in applications along with the time at which they occurred to UPDESCO before implementation of the solution. The timelines for the demonstration will be discussed and mutually agreed by UPDESCO and TCS.
2.	The Bidder should also be able to demonstrate Application server logs to capture all errors, warnings and exceptions that are generated in applications along with the time at which they occurred.	
3.	The above requirements shall be in the form of support only. Bidder shall not be responsible for interactions with any third-party.	Agreed.
4.	**Test Data Archiving**: The Bidder shall archive the result and other examination data for future references after specified time, as per requirement of client department	Supported by iON Digital Assessment Process The timeline and duration for archiving the data will be mutually agreed between UPDESCO and TCS.
5.	**MIS generation/ customized reports**: The Bidder shall provide adequate information to the Recruitment Wing as per the requirement of client department.	Supported by iON Digital Assessment Process The format and timeline of the customized reports will be mutually agreed between UPDESCO and TCS.

2.2 Essential Pre-requisites

The following is the TCS response against all essential pre-requisites/ eligibility criteria drafted by UPDESCO:

SN	Eligibility Criteria	TCS Response and details of documents	Page No.
1.	The bidder must be a registered in India under the Companies Act, 2013 for at least five years as on bid submission date.	Complied Please refer to the **Certificate of Incorporation** & **PAN CARD** enclosed.	55-58
2.	Average Annual Turnover of the bidder in last three financial years (FY 14-15, FY 15-16 and FY 16-17) should be at least INR 15 Crores.	Complied Please refer to the **CA Certificate**, **Balance Sheets** and **Profit & Loss Statements** for FY15, FY16 and FY17 enclosed.	59-60
3.	Average Annual Turnover of the bidder for recruitment /examination related business in last three financial years (FY 14-15, FY 15-16 and FY 16-17) should be at least INR 5 Crores		61-62

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4.	The bidder should have positive net worth for last three financial years i.e. (FY 14-15, FY 15-16 and FY 16-17)		
5.	The bidder should have at least 200 employees on payroll of the company as on bid submission date.	Complied Please refer to the **HR-declaration** enclosed.	63
6.	The firm should have valid GST Identification no.	Complied Please refer to the GST Registration document enclosed.	64
7.	The bidder must have successfully executed 5 Online {computer based} examination against different advertisements in India of minimum value of INR 1 crore each in last 5 years	Complied Please refer to the relevant **Work Orders/ LOIs and/or Completion/ Performance/ Experience Certificates** enclosed along with **Annexure-II**	65-89
8.	The bidder must have conducted online exam with 5,000 or more candidates in single shift for an online examination	Complied Please refer to the relevant **Work Orders/ LOIs and/or Completion/ Performance/ Experience Certificates** enclosed along with **Annexure-B**	90-102
9.	The bidder must own the complete source code of the software being used for conducting the Computer based exam. The bidder must have the copyright of the source code and all its components.	Complied iON Digital Assessment will be leveraged by TCS for covering entire computer-based examination or offline (OMR-based) examination scope from UPDESCO. TCS' iON Digital Assessment Solution, proposed in this Bid Response is in-house developed and completely owned by TCS. As part of the software ownership, TCS has all the necessary components of source code in place and possesses in-house technical skill to make the required changes to the software. Software development follows the well-defined Configuration Management Strategy. For more details, please refer to the	103

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		Configuration Management document enclosed. TCS has an in-house Quality Assurance Group as part of Delivery Assurance Group. TCS has well defined Integrated Quality Management Process (iQMS) where the Software Development Life Cycle (SDLC) has been very well-defined. Please refer to TCS **Integrated Quality Management System** for brief details on TCS' iOMS process. TCS possess in-house technical capability and capacity for any required configurations into systems. TCS has adequate no. of technical and other manpower for the configuration related tasks. Please refer the following documents enclosed attached along with the technical bid for more details: • **Self-Declaration of Source Code Ownership on page no. 103** • **TCS Integrated Quality Management System on page no. 104-107** • **TCS Configuration Management on page no. 108-111**	
10.	The bidder must have primary data center with DR site infrastructure for data Security. Both the Data Centers should be located in India in different seismic zones.	Complied TCS iON solutions are hosted through two data centers; one in Mumbai and other in Hyderabad. Mumbai DC is collocated at CtrlS (Tier-4 facility) and Hyderabad DC is collocated at Tata Communications Ltd. (TCL) (Tier-3 facility). All the data center equipment's are owned and supported by TCS India Cloud	112-117

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		Platform team. Both data centers have been certified for required standards, i.e., Tier III / IV and ISO standards. Also, both data center facilities fall under different seismic zones. Please refer to the relevant **Data Center related declaration and certificates** along with **CERT-In Certification** related to iON Digital Assessment platform infrastructure including data servers.	
11.	The bidder must have ISO 9001 certification	Complied, Please refer the attached ISO Certificates attached along with the bid document.	118-142
12.	The bidder should not be blacklisted by the central government/ any State Government/ Public Sector Units in India	Complied, Please refer attached Affidavit for Non-Blacklisting	145
13.	Authorization of Bidder's Signatory	Please refer to the attached power of attorney attached	146-153
14.	Additional Clause: The Bidder shall have to submit an affidavit that the Bidder has not been involved in any project anywhere in India wherein examination paper has been leaked or fraudulent activity has happened during the entire examination process	Please refer to the attached affidavit along with the technical bid	145

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2.3 Technical Evaluation Criteria

2.3.1 As per Clause 2; page 22: Technical Evaluation Criteria

The following is the applicable score chart for TCS as per scoring model drafted by UPDESCO for the purpose of empanelment:

Sr. No.	Evaluation criteria	Maximum Marks	TCS Response	Page No.
1.	Average Annual Turnover (AAT) of the agency in last three financial years (FY 14-15, FY 15-16 & FY 16-17) INR 15 Cr≤ AAT ≤ INR 20 Cr : 3 marks INR 20 Cr< AAT ≤ INR 22 Cr : 6 marks INR 22 Cr< AAT ≤ INR 25 Cr : 9 marks INR 25 Cr< AAT: 12 marks	12	Complied Please refer attached CA Certificate for average annual turnover of the company in last three financial years along with audited balance sheet & Profit and loss statement.	59-62
2.	Average Annual Turnover (AAT) of the agency from recruitment/ examination related business in last three financial years (FY 14-15, FY 15-16 & FY 16-17) INR 5 Cr≤ Turnover ≤ INR 7 Cr : 5 marks INR 7 Cr< Turnover ≤ INR 10 Cr : 10 marks INR 10 Cr< Turnover ≤ INR 12 Cr : 15 marks INR 12 Cr< Turnover: 20 marks	20	Complied Please refer the attached CA Certificate for average annual turnover of the company from recruitment/ examination related business in last three financial years (FY 14-15, FY 15-16 & FY 16-17)	59-60
3.	The bidder should have minimum 50 employees on payroll. for no. of employees 200 – 250: 4 marks 251 – 300: 8 marks 301 – 350: 12 marks 351 – 400: 16 marks Greater than 400 employees: 20 marks	20	Complied Please refer the attached HR Declaration which is also counter signed by Authorized Signatory	63
4.	Approach & Methodology: •Understanding of the scope of the project, Project Approach and methodology, Project Plan and Challenges Faced - 5 Marks •Completeness and comprehensiveness of Solution	20	Complied Please refer Section: 3 "iON Digital Assessment Scope Coverage" for the approach which will be used while delivering the project in consultation with UPDESCO.	6-54

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	and Functional Demonstration of Solution and Design - 5 Marks Maximum Marks- 10 marks		Demonstration & Presentation will be provided to UPDESCO Committee as per the further instructions.	
5.	The bidder must have successfully executed 5 Online {computer based}examination against different advertisements in India of minimum value of INR 1 crore each in last 5 years 3 marks for each project subject to max 15 marks Additional, 2.5 marks for each project with any state Government subject to max 5 marks	20	Complied Please refer the Annexure –II for this criteria.	65-89
6.	The bidder must have authorized and globally accepted software certifications • ISO 9001 : 3 Marks • ISO 20000-1 : 3 Marks • ISO 27001 : 4 Marks • CERT-In : 5 Marks • Any other relevant certification : 1 The Bidder's maturity in software development based on CMMi Levels: • CMMi Level 3----------1 Mark OR • CMMi Level 5----------2 Marks Maximum Marks : 18 Marks	18	Complied Please refer the attached : • ISO Certificate Declaration • Recommendation letter for ISO Certificates • ISO 9001, ISO 20000-1 & ISO 27001 • CERT-IN Certificate • CMMI Level 5 Certificates	118-142 116-117 143-144

2.3.2 Annexure V- QCBS: Technical Evaluation Criteria

Sr. No.	Evaluation criteria	Maximum Marks	TCS Response	Page No.
1.	**Organizational Strength**			
1.1	The bidder should have executed similar projects with X candidate count (conduct of Online (Computer Based) Examination)	25	Complied Please refer the Annexure – B for this criteria.	90-102

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	against different advertisements in India, (X = Department needs to put the candidate count, based on its expected candidate count) over last 3 financial years. 5 marks per Exam			
1.2	Average Annual turnover (INR) from Assessment Business for the period X years • 15Cr< 25 Cr: 5 marks • 25Cr– 50 Cr: 7 marks • > 50 Cr: 10 marks	10	Complied Please refer the attached CA Certificate for average annual turnover of the company from assessment related business in last three financial years (FY 14-15, FY 15-16 & FY 16-17)	59-62
1.3	The firm should have at least X employees on payroll of the company, at least for the last six months from the date of release of this tender (X = Expected No of Candidate Count/500 *4 + 50) a)Exam Centre Administrator – 1 per 500 nodes or less. b)IT Manager – 1 every 250 nodes c)Support Manager – 1 every 500 nodes or less 5 Marks shall be awarded for every additional 100 employees (or as decided by the Department)	25	Complied Please refer the attached HR Declaration which is also counter signed by Authorized Signatory	63
1.4	The bidder must have successfully executed X Online {computer based}examination against different advertisements in India of minimum value of INR Y crore each in last 5 years 3 marks for each project subject to max 15 marks. Additional, 2.5 marks for each project with any State Government subject to max 5 marks	20	Complied Please refer the Annexure –II for this criteria.	65-89
1.5	The Bidder should have infrastructure of min 100 nodes,	10	Complied	154

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	in DHQs of UP with validated nodes/computers, appropriate technology, hardware and software, dedicated connectivity etc. = or <20 DHQs … 2.5 marks 21-30 DHQs …….. 5 marks 31-40 DHQs ……. 7.5 marks 41-50 DHQ …….10 marks		Please refer the attached Nodes Declaration for this criteria	
1.6	Technical presentation to Evaluation Committee. Presentation may be evaluated on the following parameters: • Organization' capability and strengths • Similar Experience • Approach and Methodology • Work Plan	10	Complied Demonstration & Presentation will be provided to UPDESCO Committee as per the further instructions.	NA

2.3.3 Annexure V- L-1: Technical Evaluation Criteria

Sr. No.	Evaluation criteria	Maximum Marks	TCS Response	Page No.
1	**Organizational Strength**			
1.1	The bidder should have executed similar projects with X candidate count (conduct of Online (Computer Based) Examination) against different advertisements in India, (X = Department needs to put the candidate count, based on its expected candidate count) over last 3 financial years. 5 marks per Exam	25	Complied Please refer the Annexure –B for this criteria.	90-102
1.2	Average Annual turnover (INR) from Assessment Business for the period X years • 15Cr< 25 Cr: 5 marks • 25Cr– 50 Cr: 7 marks • > 50 Cr: 10 marks	10	Complied Please refer the attached CA Certificate for average annual turnover of the company from assessment related business in last three financial years (FY 14-15, FY 15-16 & FY 16-17)	59-62

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1.3	The firm should have at least X employees on payroll of the company, at least for the last six months from the date of release of this tender (X = Expected No of Candidate Count/500 *4 + 50) a)Exam Centre Administrator – 1 per 500 nodes or less. b)IT Manager – 1 every 250 nodes c)Support Manager – 1 every 500 nodes or less 5 Marks shall be awarded for every additional 100 employees (or as decided by the Department)	25	Complied Please refer the attached HR Declaration which is also counter signed by Authorized Signatory	63
1.4	The bidder must have successfully executed X Online {computer based}examination against different advertisements in India of minimum value of INR Y crore each in last 5 years 3 marks for each project subject to max 15 marks Additional, 2.5 marks for each project with any state Government subject to max 5 marks	20	Complied Please refer the Annexure –II for this criteria.	65-89
1.5	The Bidder should have infrastructure of min 100 nodes, in DHQs of UP with validated nodes/computers, appropriate technology, hardware and software, dedicated connectivity etc. = or <20 DHQs … 2.5 marks 21-30 DHQs …….. 5 marks 31-40 DHQs ……. 7.5 marks 41-50 DHQ …….10 marks	10	Complied Please refer the attached Nodes Declaration for this criteria	154
1.6	Technical presentation to Evaluation Committee. Presentation may be evaluated on the following parameters:	10	Complied Demonstration & Presentation will be provided to UPDESCO Committee as per the further instructions.	NA

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	• Organization' capability and strengths • Similar Experience • Approach and Methodology • Work Plan			

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3. iON Digital Assessment Scope Coverage

3.1 Scope of Engagement

TCS iON Digital Assessment Solution covers the following modules:

- **Application Management**
  - This module caters to candidates registering / enrolling for a particular assessment.
- **Allocation Management**
  - Test center allocation for the registered students.
- **Item Management**
  - Creation and sealing of Questions / Question Paper (supported with iON Content Authoring Engine for question creation by TCS SMEs or SMEs from UPDESCO).
- **Assessment Management**
  - This module caters for students to appear for a digital assessment for CBTs and offline assessment for OMR-based exams.
- **Evaluation Management**
  - Evaluation Module helps in correction of responses shared by the candidates
  - This consists of multiple approaches like
    - Online Evaluation of Digital Assessments
    - Evaluation of OMR answer sheets after scanning with Digital Scoring
- **Results Management**
  - This is for results consolidation and publishing
- **Certificate Management (Out of Scope)**
  - This module is used to generate the certificates on successful completion of the course

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This proposal would cover the salient features of Application Management, Allocation Management, Assessment Management, Evaluation Management (Online Evaluation of Digital Assessments) and Results Management.

If required by UPDESCO, TCS would also be interested to extend its services which are not included in the below scope. This would be responded separately based on the requirements from UPDESCO.

- Application Management
- Admit Card Generation
- Test center readiness as per the requirement of UPDESCO/ client department
- Preparation of test centers for computer based exam as per required capacity
- Providing mock test facility to candidates
- Helpdesk facility (Telephone/Email) on need basis depending on UPDESCO requirement
- Biometric and webcam registration of the candidates
- Test Content Management
- Deployment of trained manpower at every test center.
- Conduct of computer based examination
- Upload of candidate responses, audit trail, exam data, etc. from Test Center Servers to TCS Data Center.
- Processing of result based on correct answer key upload.
- Sharing of raw responses/data along audit trail and other exam related data

3.2 Functional Scope

1	**Capture Applicant Data –eForms**
Process	**Various means to capture applicant data**
	Applicant can apply online using digitized form available on official website
	Applicant data can be uploaded through standard template in the system using back office interface
Features	Ability to define application form using eForms
	Online publishing of eForm - Open up on any website
	Configure fields required to be captured in eForm
	Configure validations required for the e-Form
	Ability to upload scanned copy of photograph
	Ability to upload scanned copy of signature
	Ability to integrate with Payment Gateway with Nationalized Banks
	Pre-configured payment gateway with standard payment gateway providers.
	Ability to capture offline challan based payment mode details
	Ability to configure success page after form submission
	Ability to generate login ID and password for the applicant
	Email notification to the applicant for successful submission of application
	Back office module to manually create applicant records
	Ability to download all the applicants data
	Ability to upload applicant data in standard template
	View application form
	Edit application form
	Disable application form
	Search and Listing of application forms
	Feature of Captcha to prevent Trojan attacks
2	**Application Form Status Check –eForms**

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Process	**Update the application status –eForms**
	Applicant to see the status of the application using the login ID and password
	Back office administrator can update the application form status
	There may be a scenario where application status is approved only if payment is successful (in case of draft / cheque)
Features	Ability to login into the system by applicant
	View the online application form along with status in read only mode
	Back office admin can login into the system and update the status of the applicant
	Notification to the applicant on the status update of the application
3	**Test Center Management and Scheduling**
Process	**Register test centers & schedule the tests**
	Registration of various test centers and contact details
	Exam Center Verification using Capacity Estimation Process
	Configure the test details
	Map test centers with the test
Features	Ability to register test center
	Ability to configure new test along with schedule
	Back office admin can map the test centers and test
	Configurable Option to Define schedule for the test conducted at each test center
	Configurable Option to Define slots on each day for the test
4	**Test Center Allocation and Admit Card Generation**
Process	**Allocation of test cities will be done as per the candidates choice of city opted in the application based on the availability.**
	Eligible candidates will be allowed to download the Hall Ticket from the assigned portal using their credentials
	Print the Hall Ticket
Features	Hall Ticket Generation
	View terms and conditions
	Confirmation email (containing Date / Location / Time / Address / Instruction / Test Name / Course Name / Hall Ticket No etc.) sent to the candidate email address after confirmed booking
	Candidates can view their booking details at any given point
5	**Manage Question Paper - ION Content Authoring Engine**
Process	**SMEs to create questions/question paper for the test**
	Configuration of test parameters like negative marking, optional, difficulty level etc.
Features	Creation of Question Paper
	Question paper configuration and attributes
	Ability to define negative marking
	Ability to define scrutiny criteria
	Ability to set difficulty level
	Ability to upload the question paper in the Excel Format
	Ability to seal the questions/question papers post which no changes can be made.
	Advanced Validations for Excel Upload Feature
	Special Symbols accepted via excel upload
	All the Question Papers to be created in English Language
6	**Environment Check at Test Centers**
Process	**Checking environment parameters at individual test centers**
	Ensure recommended software environment availability at test centers

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	Complete Security Management Processes
	Detailed Audit of Server/Desktop/LAN etc.
Features	System scanning
	Browser compatibility check
	OS compatibility check
	Check on the No. of available machines for the test with the required configurations
	Network configuration
	Certification of the nodes eligible for conducting the test
7	**Test Server Readiness - ION Digital Assessment Exam Center**
Process	**Readiness for the test center to conduct the test**
	Request to download the question paper
	To Check the availability of the required internet bandwidth and connectivity
	Download the participant list who are going to be part of test center at particular timeslot
Features	Backup Server taking scheduled backup from Main Server at each Test Center
	Request and receive the test paper
	Encrypted data transfer
	Drive request (including Question paper) handling - Test center requesting for drive including question paper
	Ability to trace who requested question paper from test center
	Download drive including tagged Question Paper on the server
	Login ID to be available for the participant to appear in the test
	256 bit AES + RSA Encrypted data transfer
8	**Registration of participant at the test center - ION Digital Assessment Exam Center**
Process	**Participant identification and validation at the test center**
	Hall ticket validity check
	Assigning login credentials for the test
	Biometric and webcam capturing and registration
Features	Validation of hall tickets brought by the applicants
	Allocation of the seat to the candidate
	Cancellation of registration if any discrepancy
9	**Test Delivery and Monitoring - ION Digital Assessment Exam Center**
Process	**Participant attempts for the test and test node monitoring**
	Participant logs into the system using the login credentials available with them
	Attempt the test
	During the test, local administrator will monitor every node
Features	Role-based access
	User level authentication
	One question per screen
	Question navigation
	Different color coding for attempted, not attempted, mark for review
	Shuffling of Answer Options
	Ability to navigate to other Sections before completing a Section
	Monitoring log on the server for every candidate with his/her IP
	Complete traceability of any single candidate's node
	In case of Machine, Power or Network Failure, software shall be able to retrieve candidates attempted 'questions and its responses entered by the candidate fully.

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	Display of his captured photo on the screen continuously
	Restart of Test
	Back-Up and Restore available
	Ability to handle the Group Questions
	Ability to handle Multilingual Questions and the candidates can toggle on every question
10	**Result Preparation - ION Digital Assessment Data Center**
Process	**Generation of raw scores & Report generation**
	Result Generation
	Certificate Generation for internal authorization & authentication process
	MIS & Report Generation
Features	Score report, Section-wise score report, Response Report, Absentees Report, Question Paper Report, Candidate Audit report, Question Paper PDF, QP HTML Responses, Biometric log report, Candidate feedback report, Disabled Candidate report, RTI Report, Group-wise score report,
11	**Help desk – (email / voice support)**
Process	**Attending and resolving candidate Queries by email and phone calls on need basis as per the requirement of UPDESCO**
	Communication of important or urgent information to the candidates by SMS/Emails or phone calls
Features	Ability to send bulk SMS
	Ability to send bulk Emails,

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4. iON Digital Assessment Solution

4.1 Solution Features

TCS Assessment Platform offers end to end integrated solution which enables Operations by setting up reliable **Infrastructure**, build intelligent **Content** for the assessment delivered through scalable and reliable **Technology** named as iON Digital Assessment.

4.2 About iON Digital Assessment Solution

iON Digital Assessment Solution is an end-to-end assessment solution. The iON Digital Assessment solution is available as a bundle of services to provide secure, digitized testing and hiring solutions. Customers may use either the software services or content services or both.

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Technology Services – Scalable, Secure

The software service consists of assessment software used to conduct tests across multiple locations. The installation of the software is near-instantaneous and requires little, if any infrastructure capabilities (Windows XP machines and internet explorer 6 and above). 1 Million+ candidates can take the test across locations at a given time. The service ensures complete traceability into any hiring drive conducted using this service.

4.3 iON Digital Assessment Solution Architecture

The iON Digital Assessment Solution is architected as a scalable, secure and light weight system, designed to operate over a distributed architecture, by providing secure content including questions and responses wherein the distinctiveness of the test is maintained and the analysis of the test results is supported at near real time by powerful analytics engine.

The iON Digital Assessment architecture consists of a knowledge kernel, a question bank rendering engine, a hosted Assessment data center and multiple Assessment Exam Center servers. Candidates may take the exam on a LAN simultaneously by connecting to the iON Digital Assessment Exam Centre server at multiple centers.

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4.4 iON Digital Assessment Solution Highlights

Security

- System-enforced process compliance
- Role-based access
- User level authentication
- Secure and traceable installations
- 256-bit encryption for information sharing

Scalability

- Distributed architecture
- Light-weight client software
- Up to 1 million candidates can take the test simultaneously

Traceable

- Automated audit trails at multiple levels
- Complete traceability of any single candidate's performance

Standardized Test

- Unique question papers of identical difficulty level for each candidate
- Only software to support this level of standardization in assessments

Analytics – Traceability, Feedback, Standardized Question Paper

- Powerful analytics and visualization
- Performance view of candidates across geographies, colleges and age cohorts
- Analytics on the question paper, questions, concepts and domains
- Feedback on the question paper standards

4.5 iON Digital Assessment Solution Unique Features

Question Paper

- Can handle multiple formats (Multi-choice / Multi-Select / Multi lingual) of question papers
- Different types of Question papers supported – Hard coded / Question Shuffling / Option Shuffling / Parameterized Questions
- Simulation of Parameterized Questions – Multiple Unique Questions generated from a single meta / base question

Evaluation

- Instant – When the correct answers are provided in the solution, at the time of question paper creation, the solution can evaluate the responses and provide the results. Optional for the assessment owner to provide instant results to the candidate or to declare it later.
- Offline- When the correct answers are not provided in the solution, at the time of question paper creation, the correct answers would be entered in the system later and then the responses would be evaluated.
- Digital Scoring – Automated evaluation of the candidate responses from OMR sheet. This process includes image scanning of OMR sheets, uploading them in the system, configuring the answer keys to Digital Scoring solution and processing the OMR sheets.
- Digital Marking - Online Evaluation of Offline responses. Includes scanning the answer sheets and uploading them in the system, registering evaluators, assigning the answer sheets to evaluators, completion of evaluation in the system and sharing of results.

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4.6 iON Digital Assessment Process

The entire process is triggered by a request logged into the iON Digital Assessment data center for an iON Digital Assessment exam center software installation. Each time a sourcing drive is conducted, a new request for iON Digital Assessment content can be logged through the Request Manager hosted in the iON Digital Assessment server. A sourcing drive may be spread over a few days and might have multiple exam slots. At the end of each slot, the Exam Center Server connects to the iON Digital Assessment Data Centre to share the ION Digital Assessment test information and obtains the results of the sourcing drive along with the candidate information. Results of the test are instantaneous and secure and are also available on the iON Digital Assessment Dashboard with a detailed analysis of all aspects of the test.

- **Publishing Engine** to share information with various stakeholders on a Push basis.

4.7 Information Security

Security

Independent auditors audit TCS for compliance with ISO 27001. TCS' security policy governs all data center operations. TCS Security auditors internally audit data center activities periodically.

The Data Center (DC) IT infrastructure that hosts all web-based applications comprises of several tiers. Each tier will handles a particular set of functions, such as serving content (web servers), implementing business logic (application servers) or processing database transactions (Database servers). When the end user issues a request via a web browser to the web server, the web server pre-processes the request and relays it to the application server. The application server obtains necessary information from the database, processes the request and responds to the web server. The web server, in turn, formats and displays the response to the user.

A multi-tier architecture offers the following benefits:

- It is easier to modify or replace any tier without affecting other tiers

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- Adequate security policies can be enforced within the server tiers without hindering the clients.

Figure: comprehensive security framework encompassing Data Security, Physical Security, Application and Network security

Firewall

TCS employs hardening controls in operating systems, applications, databases, network, and server components. A layered, firewall architecture segregates all servers across different network segments. The firewall provides stateful packet inspection for all the incoming traffic towards any of the servers.

The firewall rule base and policies implement access restrictions for servers in each tier. For example, a database server may require additional layer of protection because it is more sensitive than the web server that provides the application's front-end.

The Firewall components deployed in the data center as under:

- Separate setup for Internet and for MPLS (both in High Availability mode)
- Layer 3/4 stateful packet inspection capabilities
- IPSec VPN connection supported
- VLANs for isolation
- FWSM Firewall Switch Module on core switches providing packet firewall features

Intrusion Prevention System (IPS)

An inline IPS from Tipping Point is used along with the firewall in the perimeter layer. An IPS prevents external attacks on vulnerable applications and OS. It prevents attacks such as Denial of Service, Sync Floods, etc. IPS provides efficient protection against zero day attacks as it automatically updates virus signatures and provides the necessary protection without user intervention.

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Server hardening checklists

TCS policies define Linux and Windows Server hardening checklists. These are reference checklists, organized as a collection of risk areas required to be covered as part of installation of new server operating systems. They aim to successfully harden Linux and Windows Operating Systems so that there are no vulnerabilities left, making the TCS environment secure. All TCS servers are hardened in line with these checklists.

Other security controls

Apart from firewalls, IPS and server hardening checklists, several other controls are employed to comprehensively secure the infrastructure:

1. Secured Socket Layer (SSL) is used to authenticate and access hosted web applications. F5 load balancers implement SSL.
2. FWSM controls access to servers. Access to the unified storage system (FC, iSCSI, NFS and CIFS) too is configured through FWSM.
3. A demilitarized zone is implemented for Internet or public-facing services such as email relay and DNS.
4. 24/7 manned security and video surveillance in DC premises. Perimeter inspections
5. Biometric based physical access controls
6. A managed antivirus system is deployed in the DC. Anti-spam and anti-spy-ware systems are implemented
7. An isolated management LAN runs services to proactively monitor and manage servers.
8. Proactive patch management policies and deployment procedures are implemented in the DC.
9. Database for each customer is maintained separate from other customers.

Log correlation to trace security incidents

Details about incoming requests and its subsequent processing are captured in individual tiers. In case of disputes and incidents, the logged details are co-related across tiers to create a complete trace.

Web Server logs

The web server logs capture all requests that come to the Apache Web Server. They capture the following:

- The URL that was requested
- Time at which the request was made
- The IP address from which the request was made
- The cookie that could give an indication of the user making the request
- The amount of data that was sent out
- HTTP status
- Time taken to serve the request

Application server logs

Application level logs capture all errors, warnings and exceptions that are generated in applications along with the time at which they occurred.

Database logs

Database logs capture the following:

- The URL that was requested

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- The time at which the request was made
- The user and the organization that made the request
- The amount of data that was sent as part of the request
- The amount of data that was sent back for the user
- The time it took to serve the request
- Optionally, the time taken to execute the main methods in the request
- Optionally, the queries executed and the time taken to execute each query

Audit logs

Audit logs capture the following:

- For a database table, the last user who updated the table
- For a database table, the last update time

Additionally, it is possible to turn on audit logs for each application table. In this case, all changes to the data records are logged in a parallel audit table and all past versions of a record are maintained here.

Time on all the servers is maintained in-sync. Based on timestamps in different logs mentioned above, it is possible to track the progress of a request, from the time it hit the web server, through the Application Server, and through the queries executed and the data updated in specific tables. It is thus possible to track data changes that have occurred due to different actions taken by users of an application. Logs are maintained for normal users as well as privileged users such as application administrators.

Privileged users cannot turn-off logs; all activities of all types of users can be traced and audited.

4.8 Business Continuity & Disaster Recovery

Business continuity and IT disaster recovery are essential elements of business resiliency and have a common objective to manage risks that disrupt business. Aggressive competitive scenario, clients with greater service demands, more restrictive regulatory requirements, and rigid corporate oversight raise the expectations for achieving and demonstrating business resiliency. TCS brings this unique value at no extra cost to your business.

TCS has robust Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP) framework to ensure that operations continue in an emergency and quickly recover from the disaster with minimum impact to the business. The framework is supported by the following documents and detailed processes:

- Site overview
- The business continuity strategy for applications and resources
- Business Impact Analysis along with the results and the defined Recovery Time Objective (RTO) and Recovery Point Objective (RPO) values. TCS ensures that all critical applications are up and running with no outage having an impact of more than the RTO of 4 hours on business. If these timelines cannot be met with the inbuilt redundancy at the primary site, TCS will advise the DR Committee to shift the operations to the alternate site in Hyderabad. The DR site is set up with the same level of redundancy as the primary site. There is constant replication running which ensures that the time lag in replication is not more than the RPO of 2 hours
- The call tree and notification process
- BCP/DRP committee along with their specific roles and responsibilities

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These ensure:

- Prevention of interruption to normal business activity
- Protection of critical business applications from natural or unnatural failures or disasters and the resultant loss of business due to the unavailability of normal business processes or IT resources

Further to ensure that the BCP/DRP is consistent with the dynamic times, drills are conducted at regular intervals and modifications are made to the plan/processes accordingly.

Benefits

- Proactively identifies the impacts of an operational disruption
- Provides an effective response which minimizes the impact on your enterprise
- Maintains the ability to manage uninsurable risks
- Enhance your enterprises reputation and competitive advantage in its ability to maintain delivery, and recovery from a disaster

Disaster Recovery

TCS SMB currently services customers out of two data centers in different geographic locations within India; one in Mumbai and the other in Hyderabad. Both data centers are equipped with similar servers, storage devices, network equipment, network links and other resources.

All TCS iON solutions are hosted at both data centers.

During normal operations, each data center caters to an identified set of customers. Application traffic for a specific customer is statically mapped to one of the two data centers. In case of a disaster, all application traffic for the affected data center is mapped to the second surviving data center.

The readiness of the alternate application and network infrastructure, in case of a disaster, is staged well in advance. The subsections below provide a brief glimpse of infrastructure readiness maintenance (for some of the components).

All storage volumes are provisioned in a unified storage system within the data center. Volume replication between the storage systems in the two data centers ensures data safety. In case of a disaster at any of the data center, the solutions active at the surviving data center are hence capable of handling application requests for all customers.

Network infrastructure readiness

Both data centers have dedicated Internet connectivity through separate leased lines. The data centers maintain their own pool of public IP addresses. Apart from Internet traffic, both data centers may also connect to SMB customer sites using MPLS connectivity. Such MPLS links arising from customer sites, the primary connectivity is terminated at the main data center identified for that customer. A backup connectivity is terminated at the other data center.

A layout of the network links at both the Mumbai and Hyderabad is illustrated below.

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Figure: Network infrastructure readiness

All hosted SMB solutions are made available to end users in the form of friendly URLs. The requisite DNS infrastructure is available for both Internet as well as MPLS environments. For connecting over Internet, a highly available public DNS service is provisioned from a third-party service provider. For connecting over MPLS, TCS maintains a highly available internal DNS at both data centers.

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5. Service Delivery Methodology (Operations)

5.1 Standard Operating Procedures (SOP)

TCS has a well-defined Standard Operating Procedures (SOP) which includes all processes starting from a Project Kick Off Meeting (post the receipt of Purchase Order) till the Project Wind up Meeting (post publishing the results, analytics).

The framework of SOP includes

Pre-Assessment Planning	Assessment Day	Post Assessment
Project Kick Off Meeting	Test Center Readiness	Handing over raw responses/data
Online Application & Registration Management	Biometric and webcam registration	Objections Management
Admit Card Generation	Conduct CBT	Result Generation
Finalization of Test Centers	Command Center	Certificate for internal authorization Generation
Secured Question paper creation		MIS & Report Generation
Test Center Staff - Identification & Management		Resource Management
Test Center Readiness – Planning		Project Wind up Meeting
Upload Question Paper in a secured environment		
Training of Candidates		
Training of Staff		
Mock Test		

Post the project kick off meeting, TCS can share with UPDESCO, the customized SOP for the conduct of computer based assessment.

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5.2 Helpdesk Support

TCS iON Helpdesk would be available during entire lifecycle of the assessment for any queries or service request on need basis depending upon the requirement of the examination.

- Helpdesk available for customers – Time will be mutually agreed between UPDESCO and TCS.
- Modes of Reach
  - Tele support
  - Email
- Modes of communication (Helpdesk – to-Customer)
  - Telephone
  - Email
  - SMS

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6. Value Proposition

6.1 Business Value Proposition

Shortest time to Activate – Our solutions and associated processes have been benchmarked against the best in the industry worldwide. Solution activation, which is an extensive process encompassing Provisioning, Configuring and Training; takes between 1-2 Weeks to deploy and go-live for any exam cycle, which is one of the shortest in the industry.

Cost Efficiency – The whole solution has been developed to optimize the value proposition for our customer with maximum possible cost efficiency. Operation expenditure based model ensures minimum upfront investment by the customer for solutions' implementation & usage, and the perpetual beta model effectively mitigates IT obsolescence and keeps the whole implementation up-to-date, 365X24X7. Compared to a Paper/Pencil Test, our solution offers far greater effective and efficient evaluation of students at 30-40% lower in total cost incurred. iON Content Authoring Engine has a unique intelligent capability of generating questions by scientific construction and pedagogical modelling of options and distractors. This results in fewer and higher quality experts involved in question creation leading to more security and lesser cost and effort

Service Efficiency – Extensive integration among different sessions of the solution provide seamless access and mobility across the solution, which drives unparalleled efficiency across the exam cycle. With effective leverage of technology, we ensure one of the fastest and most efficient test center enablement and test delivery.

Reliable Delivery – Our solutions have been tested multiple times in the most stringent conditions before hitting the market to make sure that it has the highest possible reliability in implementation and usage. Our world class testing team conducted more than 100,000 assessments in different environment but came up with zero defects. Extreme tests ensured that our solutions are one of the most secured and transparent solutions globally, and that our customers get nothing short of the best.

6.2 Solution Value Proposition

Scalability – The entire solution is based on distributed architecture to ensure scalability, and ease of implementation and use. Light-weight client software helps to rapidly scale up our solution to fit client's needs in the shortest possible duration. The solution has been designed in such a way that up-to 300,000 candidates can simultaneously take the test without any glitch.

Traceability – One of the differentiating features of our solution is automated audit trails at multiple levels. It ensures complete traceability of any single candidate's performance at any point by anyone who has the access rights. It ensures that the whole process is extremely transparent, credible and objective, which are the hallmarks of a good assessment system.

Audit Trail – ION Digital Assessment is inherently transparent and error free. In our experience manual correction processes are generally not even a one sigma process, whereas iON Digital Assessment is at the minimum a six sigma solution. It is also completely auditable at all stages with rich data trails that can be archived and retrieved for RTI purposes.

Flexibility – Provides extensive support in handling multiple formats (Multi-choice / Multi-Select / Multi-lingual) of question papers, multiple types (Hard coded / Question Shuffling / Option Shuffling / Parameterized Questions) of Question papers and supports multiple formats (instant / offline / onscreen marking) of evaluation.

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Security – Security measures of global standards have been incorporated in our solution to make it extremely fool-proof and secure. The process compliance of the solution is system-enforced to ensure it cannot be tampered with. Role-based access, user level authentication, secure and traceable installations, 256-bit encryption for information sharing, etc. are some of the security mechanisms that have been integrated to restrict unauthorized access to sensitive data and processes.

Standardized – The solutions have been designed in adaptive format which produces unique question papers of identical difficulty level for each candidate. This effectively negates possibility of malpractices like cheating and makes assessment process equitable, fair and just. Currently the TCS iON Digital Assessment Solution is the only software to support this level of standardization in assessment.

Mock Test – A mock test / practice test can be hosted in UPDESCO/ Client department website where candidates can come and take this mock test, unlimited number of times. This provides more confidence to the candidate in taking up an online exam.

Publishing of Results – The solution also has a feature to allow the candidates to go to a web page, enter their application number and view their score. They will also be able to print their score card.

Analytics – The solution offers real-time analytics and visualization for pre, mid and post assessment analyses. Elaborate analytics include performance view of candidates across geographies, colleges and age in the form of graphs, charts, tables, etc. for better understanding and reflection. Analytics on the question paper, questions, concepts and domains are also provided for comprehensive analysis of the whole assessment process from multiple angles. Feedback on the question paper standards is separately provided.

Quality of Test Design – Creation management of Test Packs, calibration of test content, etc. ensures our test items are of global standards. Sophisticated multi-dimensional analytics are deployed to enhance, verify and retire questions. Meta Questions are included and difficulty level is constantly validated to deliver identical difficulty level of questions to all test takers. This ensures that a small question set can be expanded resulting in considerable savings in effort and time to set the questions.

Quality of Infrastructure – Dedicated iON Digital Assessment Examination and Test Centers have been provisioned for timely and smooth conduction of tests. Test centers are thoroughly sanitized before the test, which include Examination Center Server Check, Hardware/Software/Browser /Network Checks, Test Candidate Machine Check, Hardware/Software/Browser Checks, etc., to ensure that tests are absolutely glitch-free. Also the iON Digital Assessment Learning Center ensures greater proficiency in the use of digital assessment software on the part of candidates and provides a level playing field for candidates from rural and impoverished backgrounds who may not be digital natives.

6.3 Organization Value Proposition

Organization – A part of the Tata Group, India's largest industrial conglomerate, TCS has over 383,000 of the world's best trained consultants in 55 countries. TCS has crossed revenues of US $ 17 billion and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

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End to end solution – TCS' iON Digital Assessment Platform offers integrated end-to-end IT solutions for comprehensive test administration and support. It effectively is a one-stop shop for every IT need in the Exam Cycle.

Best-in-class - Solution has been thoroughly integrated and is devoid of any vendor bias. Member institutions have been effectively leveraged to boost infrastructure for nationwide scale and reach.

Delivery Robustness - Dedicated Delivery Model ensures timely and efficient delivery of solutions. Managed SLAs help us exceed customer expectation in terms of administration and delivery.

Certifications – TCS's quality objective is to reduce the cost of quality on a continuous basis. All TCS quality initiatives are directed towards defect prevention and quality improvement practices, to meet this objective. Reduction in cost of quality provides on-time, on-budget project delivery and year-on-year productivity improvement to the customer.

To achieve this objective at an enterprise level, TCS has evolved an Integrated Quality Management System (iQMS). This system addresses quality assurance practices for all types of projects including application development and support. iQMS is an integrated approach to implement quality practices of world-class benchmarking models like ISO 9001:2008, CMMI, PCMM®, Six Sigma and SW CMM®, ISO 27001, and ISO 20000 in line with TCS's strategic objectives.

TCS is the first organization in the world to receive an enterprise wide CMMI and PCMM Level 5 certification, based on its definition and deployment of iQMS.

In 2010, TCS became the first organisation in the world to be appraised at Level 5 of CMMI-Svc model.

Assessment Experience – The solution has also been successfully deployed within TCS for more than 9 years for internal assessment and recruitment purposes. Exposure to Benchmarked practices ensures superior quality of the solution.

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No. 11- 84781

FRESH CERTIFICATE OF INCORPORATION CONSEQUENT ON CHANGE OF NAME

IN THE OFFICE OF THE REGISTRAR OF COMPANIES, MAHARASHTRA, MUMBAI.

In the matter of ORCHID PRINT INDIA LIMITED

I hereby approve and signify in writing under Section 21 of the Companies Act, 1956 (Act of 1956) read with the Government of India, Department of Company Affairs, Notification No. G.S.R. 507E dated the 24th June 1985 the change of name of the Company.

from ORCHID PRINT INDIA LIMITED

to TATA CONSULTANCY SERVICES LIMITED

and I hereby certify that ORCHID PRINT INDIA LIMITED

which was originally incorporated on 19th day of JANUARY 1995 under the Companies Act, 1956 and under the name R R DONNELLEY (INDIA) PRIVATE LIMITED having duly passed the necessary resolution in terms of section 21/22/(1)(a)/22(1)(b) of the Companies Act, 1956 the name of the said Company is this day changed to

TATA CONSULTANCY SERVICES LIMITED and this certificate is issued pursuant to Section 23(1) of the said Act/

Given under my hand at MUMBAI this 17th day of DECEMBER 2002 ~~one thousand nine hundred~~

~~Ninety~~

(V.A.VIJAYAN MENON)
Registrar of Companies
Maharashtra, Mumbai.

TATA CONSULTANCY SERVICES LTD. MUMBAI

No. 11- 84781

FRESH CERTIFICATE OF INCORPORATION CONSEQUENT ON CHANGE OF NAME

IN THE OFFICE OF THE REGISTRAR OF COMPANIES, MAHARASHTRA, MUMBAI.

In the matter of R R DONNELLEY (INDIA) LIMITED

I hereby approve and signify in writing under Section 21 of the Companies Act, 1956 (Act of 1956) read with the Government of India, Department of Company Affairs, Notification No. G.S.R. 507E dated the 24th June 1985 the change of name of the Company.

from R R DONNELLEY (INDIA) LIMITED

to ORCHID PRINT INDIA LIMITED

and I hereby certify that R R DONNELLEY (INDIA) LIMITED

which was originally incorporated on 19th day of January 1995 under the Companies Act, 1956 and under the name R R DONNELLEY (INDIA) PRIVATE LIMITED having duly passed the necessary resolution in terms of section 21/22/(1)(a)/22(1)(b) of the Companies Act, 1956 the name of the said Company is this day changed to ORCHID PRINT INDIA LIMITED and this certificate is issued pursuant to Section 23(1) of the said Act/

Given under my hand at MUMBAI this 19th March 2001

DY. (B. CHANDRA)
Registrar of Companies
Maharashtra, Mumbai.

TATA CONSULTANCY SERVICES LTD. MUMBAI

प्रारूप० आई० आर०
Form I. R.

निगमन का प्रमाण-पत्र

CERTIFICATE OF INCORPORATION

सं०.....का सं०.....
No. 11-84781 ....of 19 95 .....

मैं एतद्द्वारा प्रमाणित करता हूं कि आज.....
.....
.....
कम्पनी अधिनियम 1956 (1956 का 1) के अधीन निगमित की गई है और यह कम्पनी परिसीमित है।

I hereby certify that RR DONNELLEY (INDIA) PRIVATE LIMITED Word "Private" Deleted /S 43A(1),43A(1A),43A(1B)43A(1C) w.e.f. 5/7/95 is this day incorporated under the Companies Act, 1956 (No. 1 of 1956) and that the Company is limited.

मेरे हस्ताक्षर से आज सं०..... को दिया गया।
Given under my hand at BOMBAY this NINETEENTH day of JANUARY One thousand nine hundred and NINETY FIVE

(S.R.V.V.SATYANARAYANA)
कम्पनियों का रजिस्ट्रार
Addl. Registrar of Companies
Maharashtra

Seal of the Registrar of Companies Maharashtra

TATA CONSULTANCY SERVICES LTD. MUMBAI

आयकर विभाग भारत सरकार

INCOME TAX DEPARTMENT GOVT. OF INDIA

TATA CONSULTANCY SERVICES LIMITED

19/01/1995

Permanent Account Number

AAACR4849R

TATA CONSULTANCY SERVICES LTD. MUMBAI

K B J & ASSOCIATES

CHARTERED ACCOUNTANTS

8 – Andheri Himalaya Society,
41, Swami Nityanand Marg, Next to Court,
Opp. Railway Station, Andheri (E), Mumbai, 400 069.

www.kbjassociates.com
E-mail: mailbank@ kbjassociates.com
TELEPHONE: 2682 1827, 2682 1828.

Ref: Cert: 43 /2017-18

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Net Worth and Revenue of **Tata Consultancy Services Limited (TCSL),** having its registered office at 9th Floor, Nirmal Building, Nariman Point, Mumbai-400021, during the last three financial years ending on 31st March, 2017 (i.e. FY 2014-15 to 2016-17) is as stated below.

(Amount in crore)

	Year 2014-15	Year 2015-16	Year 2016-17
	(Fig. as per Indian gap)	(Fig. as per IND-AS)	(Fig. as per IND-AS)
Annual Average Turnover (Sector Wise)			
Online Examination	425	585	689
Software Development & Other IT related services	73,153	85,279	92004
Other areas of Operation (specify)			
Total	73,578	85,864	92,693
	Year 2014-15	Year 2015-16	Year 2016-17
Net Worth	45,416	65,013	78,022
Profit from	Year 2014-15	Year 2015-16	Year 2016-17
Online Examination	19,257	23,075	23,653
Software Development & Other IT related services			
Other areas of Operation (specify)			

TATA CONSULTANCY SERVICES LTD. MUMBAI

KBJ & ASSOCIATES MUMBAI Chartered Accountants

We have verified the aforesaid figures on the basis of revenue register, other relevant records and Audited Financial statements of TCSL for the last three financial years ended on 31st March, 2017 made available to us and information & explanations provided to us.

For K B J & ASSOCIATES.
(Chartered Accountants)
(Firm Registration No. 114934W)

Kaushik B. Joshi
Proprietor
(Membership No.48889)

Date: 23rd June , 2017
PLACE: Mumbai

K.B.J. & ASSOCIATES MUMBAI Chartered Accountants

TATA CONSULTANCY SERVICES LTD. MUMBAI

TATA CONSULTANCY SERVICES LIMITED

Balance Sheet as at March 31, 2017, 2016 and April 1, 2015

(₹ crores)

	Note	As at March 31, 2017	As at March 31, 2016	As at April 1, 2015
ASSETS				
Non - current assets				
(a) Property, plant and equipment	4	9,214	9,056	7,629
(b) Capital work-in-progress		1,477	1,640	2,741
(c) Intangible assets	5	17	24	31
(d) Financial assets				
(i) Investments	6(i)	2,201	2,229	2,283
(ii) Loans	7(i)	6	2,432	1,587
(iii) Other financial assets	8(i)	638	1,179	1,080
(e) Income tax assets (net)		4,560	4,230	3,956
(f) Deferred tax assets (net)	9	2,447	2,530	2,321
(g) Other assets	10(i)	579	720	843
Total non - current assets		21,139	24,040	22,471
Current assets				
(a) Inventories	11	21	9	15
(b) Financial assets				
(i) Investments	6(ii)	40,729	21,930	971
(ii) Trade receivables	12	16,649	19,058	17,392
(iii) Unbilled revenue		4,235	2,712	2,631
(iv) Cash and cash equivalents	13	790	4,383	461
(v) Other balances with banks	14	526	423	16,074
(vi) Loans	7(ii)	2,704	2,523	1,337
(vii) Other financial assets	8(ii)	1,418	866	884
(c) Other assets	10(ii)	1,547	1,473	1,503
Total current assets		68,619	53,377	41,268
TOTAL ASSETS		89,758	77,417	63,739
EQUITY AND LIABILITIES				
Equity				
(a) Share capital	15	197	197	197
(b) Other equity	16	77,825	64,816	51,352
Total Equity		78,022	65,013	51,549
Liabilities				
Non-current liabilities				
(a) Financial liabilities				
(i) Long-term borrowings	17(i)	44	50	65
(ii) Other financial liabilities	18(i)	245	293	411
(b) Employee benefit obligation		63	48	56
(c) Provisions	19(i)	39	40	94
(d) Deferred tax liabilities (net)	9	314	366	272
(e) Other liabilities	20(i)	330	298	281
Total non-current liabilities		1,035	1,095	1,179
Current liabilities				
(a) Financial liabilities				
(i) Short-term borrowings	17(ii)	200	113	186
(ii) Trade and other payables		4,874	5,370	6,855
(iii) Other financial liabilities	18(ii)	1,262	2,083	1,001
(b) Unearned and deferred revenue		1,126	1,068	870
(c) Current income tax liabilities (net)		1,046	536	350
(d) Employee benefit obligation		1,376	1,164	982
(e) Provisions	19(ii)	66	115	103
(f) Other liabilities	20(ii)	751	860	664
Total current liabilities		10,701	11,309	11,011
TOTAL EQUITY AND LIABILITIES		89,758	77,417	63,739
NOTES FORMING PART OF THE FINANCIAL STATEMENTS	1-37			

As per our report attached

For and on behalf of the Board

For Deloitte Haskins & Sells LLP
Chartered Accountants

P. R. Ramesh
Partner

Mumbai, April 18, 2017

N. Chandrasekaran
Chairman

V. Ramakrishnan
CFO

Dr. Ron Sommer
Director

Aarthi Subramanian
Executive Director

O. P. Bhatt
Director

Rajesh Gopinathan
CEO and Managing Director

Ishaat Hussain
Director

V. Thyagarajan
Director

Prof. Clayton M Christensen
Director

N. Ganapathy Subramaniam
COO and Executive Director

Dr. Vijay Kelkar
Director

Aman Mehta
Director

Suprakash Mukhopadhyay
Company Secretary

TATA CONSULTANCY SERVICES LTD. MUMBAI

TATA CONSULTANCY SERVICES LIMITED

Statement of Profit and Loss for the years ended March 31, 2017 and 2016

(₹ crores)

	Note	2017	2016
I. Revenue from operations		92,693	85,864
II. Other income (net)	21	4,568	3,757
III. TOTAL INCOME		97,261	89,621
IV. Expenses:			
(a) Employee benefit expenses	22	48,116	42,420
(b) Other operating expenses	23	17,488	16,390
(c) Finance costs	26	16	13
(d) Depreciation and amortisation expense		1,575	1,459
TOTAL EXPENSES		67,195	60,282
V. PROFIT BEFORE TAX (III-IV)		30,066	29,339
VI. Tax expense:			
(a) Current tax	9	6,643	6,376
(b) Deferred tax	9	(230)	(112)
TOTAL TAX EXPENSE		6,413	6,264
VII. PROFIT FOR THE YEAR (V-VI)		23,653	23,075
VIII. OTHER COMPREHENSIVE INCOME / (LOSSES)			
(A) (i) Items that will be reclassified subsequently to the statement of profit and loss			
(a) Net changes in fair values of investments other than equity shares carried at fair value through OCI		740	82
(b) Net changes in fair values of intrinsic value of cash flow hedges		41	(73)
(c) Net changes in fair values of time value of cash flow hedges		3	(21)
(ii) Income tax on items that will be reclassified subsequently to statement of profit and loss		(261)	(15)
(B) (i) Items that will not be reclassified subsequently to the statement of profit and loss			
(a) Remeasurement of defined employee benefit plans		(200)	(122)
(b) Changes in fair values of investment in equities carried at fair value through OCI		(20)	5
(ii) Income tax on items that will not be reclassified subseqently to the statement of profit and loss		-	12
TOTAL OTHER COMPREHENSIVE INCOME / (LOSSES)		303	(132)
IX. TOTAL COMPREHENSIVE INCOME FOR THE YEAR		23,956	22,943
X. Earnings per equity share - Basic and diluted (₹)	31	120.04	117.11
Weighted average number of equity shares (face value of ₹ 1 each)		197,04,27,941	197,04,27,941
XI. NOTES FORMING PART OF THE FINANCIAL STATEMENTS	1-37		

As per our report attached

For Deloitte Haskins & Sells LLP
Chartered Accountants

P. R. Ramesh
Partner

Mumbai, April 18, 2017

For and on behalf of the Board

N. Chandrasekaran
Chairman

V. Ramakrishnan
CFO

Dr. Ron Sommer
Director

Aarthi Subramanian
Executive Director

O. P. Bhatt
Director

Rajesh Gopinathan
CEO and Managing Director

Ishaat Hussain
Director

V. Thyagarajan
Director

Prof. Clayton M Christensen
Director

N. Ganapathy Subramaniam
COO and Executive Director

Dr. Vijay Kelkar
Director

Aman Mehta
Director

Suprakash Mukhopadhyay
Company Secretary

TATA CONSULTANCY SERVICES LTD. MUMBAI

Dated: 20nd April 2018

To,
The Managing Director,
UPDESCO,
Uptron Building,
Gomti Nagar, Lucknow

Subject: Self Certificate for number of employees in permanent payroll.

I, Sriram Jayaraman, of Tata Consultancy Services Limited (TCS), corporate office located at TCS House, Raveline Street, 21 D.S.Marg, Fort, Mumbai 400 001 hereby certify and confirm that TCS has more than 600 employees working on permanent payroll of the company at various office locations.

TCS Employee Strength reported as on 31st December 2017 across the world is 390,880.

This information is true to the best of our knowledge.

For Tata Consultancy Services Limited

Name : Sriram Jayaraman

In capacity of : HR Head, TCS iON

TATA CONSULTANCY SERVICES LTD. MUMBAI

Name : Venguswamy Ramaswamy

In capacity of : Global Head-TCS iON

TATA CONSULTANCY SERVICES
Tata Consultancy Services Limited
Empire Plaza Empire Industrial Estate Adjacent to Empire Vitrum Glass 101 LBS Marg Vikhroli West Mumbai 400 083 India
Tel 91 22 6778 6565 Fax 91 22 6778 6500 e-mail corporate.office@tcs.com website www.tcs.com
Registered Office 9th Floor Nirmal Building Nariman Point Mumbai 400 021
Corporate Identification No. (CIN): L22210MH1995PLC084781

सत्यमेव जयते

Government of India

And

Government of Maharashtra

Form GST REG-25

Certificate of Provisional Registration

1.	GSTIN	27AAACR4849R1ZL	
2.	PAN	AAACR4849R	
3.	Legal Name	TATA CONSULTANCY SERVICES LIMITED	
4.	Trade Name	TATA CONSULTANCY SERVICES LIMITED	
5.	Registration Details under Existing Law		
	Act		Registration Number
(a)	TIN under Value Added Tax		27300295730V
(b)	Central Sales Tax Registration Number		27300295730C
(c)	Service Tax Registration Number		AAACR4849RST012
(d)	Corporate Identity Number / Foreign Company Registration Number		11-84781
(e)	Importer / Exporter Code Number		0388031964
Date	28/06/2017		

This is a Certificate of Provisional Registraion issued under the provisions of the Act.

TATA CONSULTANCY SERVICES LTD. MUMBAI

TASK ASSIGNMENTS

Project Experience Details

Sr. No.	Details	
1.	Project Name	MBBS Entrance Examination 2017
2.	Client Name & Details	All Indian Institute of Medical Sciences Ansari Nagar, New Delhi- 10029 Dr. O.P Sharma Asstt. Controller (Exams) Tel : +91 9868178803 Email: ace.aiims@gmail.com
3.	Project Value (INR)	Approx. 982 Lakhs
4.	Project Description	• Selection of Online Examination Centers/Venues • Complete Security Management Process • Student handling process at examination centre • Details Audit of Server/Desktop/LAN etc. • Manpower Availability • Conduct of Online examination • Biometric Registration before start of exam (digital photo, bio-metric finger print etc.) • Feedback from candidates • Monitoring and supervision • Transfer/export data in encrypted format • Evaluation of Scores • RTI Support
5.	Services Provided by the Firm	

Sr. No.	Details	
1.	Project Name	Recruitment of Junior Engineer'16
2.	Client Name & Details	Uttar Pradesh Jal Vidyut Nigam Limited 10th Floor, Shakti Bhawan Extension, Lucknow Mr. D.K Ojha Secretary +91 9415900973
3.	Project Value (INR)	Approx. 155 Lakhs
4.	Project Description	End & End (Application to Merit List Generation) Services provided for the Recruitment of Junior Engineer'16
5.	Services Provided by the Firm	

Sr. No.	Details	
1.	Project Name	Common Admission Test 2016
2.	Client Name & Details	Indian Institute of Management, Bangalore Bannerghatta Road, Bengaluru, Karnataka 560076

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		Prof. Rajendra K Bandi +91 9742221336 Convener CAT 2016
3.	Project Value (INR)	Approx. 1700 Lakhs
4.	Project Description	End & End (Application to Merit List Generation) Services provided for the Common Admission Test 2016
5.	Services Provided by the Firm	

Sr. No.	**Details**	
1.	Project Name	RRB Non-Technical Popular Category (Graduate)
2.	Client Name & Details	Railway Recruitment Board, Bhubaneswar D-79/80, Rail Vihar, Chandrasekharpur, Bhubaneswar, Odisha 751023 Shri Jai Dev Kumar Chairman – Railway Recruitment Board, Bhubaneshwar Phone : 0674 230 3015 Email Id : kumar.jd2012@gmail.com
3.	Project Value (INR)	Approx. 21300 Lakhs
4.	Project Description	Services provided to conduct computer based test for Non-Technical Popular Category Graduate Examination as per below mentioned scope: • Allocation Management • Item Management • Computer Based Assessments • Evaluation Management • Post Assessment
5.	Services Provided by the Firm	

Sr. No.	**Details**	
6.	Project Name	Common Admission Test 2015
7.	Client Name & Details	Indian Institute of Management, Ahmedabad Vastrapur, Ahmedabad, Gujarat 380015 Prof. Tathagata Bandyopadhyay IIM Ahmedabad Phone: +91 9408684256 Email : director@iimahd.ernet.in
8.	Project Value (INR)	Approx. 1500 Lakhs
9.	Project Description	End & End (Application to Merit List Generation) Services provided for the Common Admission Test 2015
10.	Services Provided by the Firm	

Sr. No.	**Details**	
1.	Project Name	Common Admission Test 2014
2.	Client Name & Details	Indian Institute of Management, Indore Prabandh Shikhar, Rau Pithampur Road, Indore, Madhya Pradesh 453556 Prof. Rohit Kapoor IIM Indore

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		Phone : 91 (731) 2439666 Email : director@iimidr.ac.in
3.	Project Value (INR)	Approx. 1300 Lakhs
4.	Project Description	End & End (Application to Merit List Generation) Services provided for the Common Admission Test 2014
5.	Services Provided by the Firm	

Sr. No.	**Details**	
1.	Project Name	CWE SPL-VI Main Exam Recruitment of Specialist Officers
2.	Client Name & Details	Institute of Banking Personnel Selection, Cdr S S Tiwari Manager Online Exams, IBPS House (Behind Thakur Polytechnic College) 99 DP Road. Kandivali (E) Mumbai – 400101. Tel No: 022 – 28543310
3.	Project Value (INR)	Approx. 628 Lakhs
4.	Project Description	• Test Center Finalization • Security Management Process • Validation of Candidates • Conduct of Online examination • Report Generation • Manpower Management • Data Security • Incidence Reporting • Regeneration of questions and answers as required by RTI • Providing Database of candidates' applied/attended/scores as per the requirement of IBPS
5.	Services Provided by the Firm	

For Tata Consultancy Services Limited

Deepali Saxena
Regional Sales Head

Date: 21.03.2018
Place: Lucknow

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जवाहरलाल स्नातकोत्तर आयुर्विज्ञान शिक्षा एवं अनुसंधान संस्थान (जिपमेर) *(स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार के आधीन राष्ट्रीय महत्व का संस्थान)* धन्वन्तरि नगर, पुदुच्चेरी *605 006*
दूरभाष / Tel: 0413-2272380-390
फैक्स / Fax: 0413-2272066

Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER) (An Institution of National Importance under Ministry of Health & F.W., Government of India) Dhanvantari Nagar, Puducherry 605 006,
Tel. : 0413-2272380-390
E-Mail : jipmer_academic@yahoo.co.in

No. Edn. 11(1)/MBBS/EE/2017 Dated : 15 JUN 2017

SERVICE / WORK ORDER

To

M/s. TATA Consultancy Services,
Nirmal Building,
9th Floor, Nariman Point,
Mumbai – 400 002.

Sir,

Sub: JIPMER, Puducherry - 6 – On-line mode of conduct (Computer Based Test) for JIPMER Entrance Examination for admission to MBBS course 2017 session – Release of Service/Work order – Reg.

Ref: Office order No. JIP/Academic Section/EoI/Online Examination/2017/01 dated 27.01.2017.

***

In continuation to this office Service / Work Order cited under reference, JIPMER is in acceptance of your negotiated financial offer of

+ Service Tax (if applicable) per candidate for JIPMER Entrance Examination for admission to MBBS Course – 2017.

As per the data sent by you through e.mail dated 07.06.2017 the total counts confirmed to 1,89,667 as detailed below:

Sl. No.	Description	Candidate count	Rate per candidate	Amount ₹.
1	Conducting online assessment for MBBS Entrance Examination 2017			9,82,47,506/-

(Rupees Nine Crore Eighty Two lakhs forty seven thousand five hundred and six only)

We have accepted for reference, the relevant documents submitted by you in support of your response to our RFP.

You are required to acknowledge this work order in this regard.

Contn/.

TATA CONSULTANCY SERVICES LTD. MUMBAI

An agreement on CBT as a MOU duly executed on 17-02-2017 to be complied with.

This work order is a applicable towards MBBS course – 2017 Entrance Examination of JIPMER :

1. Creation of on-line registration of applications with valid payment gateway.
2. Generation and issue of hall tickets through download on its due completion.
3. Conduct of computer based tests at various centres across India in two shift on 04.06.2017 Sunday (Morning 10am 12.30pm & Evening 3.00pm to 5.30pm) as advertised by JIPMER.
4. Provision of Invigilators with authentic badges for all on duty.
5. Provision of prominent display, signage and water arrangements at Test Centres.
6. Provision of verification document with Photograph, Signature of all registered candidates centre wise to the Institute Representative (IR).
7. Photo based and signature based verification of candidates at test centres and biometric finger-print data capture of candidates taking up the examination at start and completion.
8. Completion of Computer based Entrance Examination with on-line declaration of results – rank and category wise.
9. Generation and issue of individual rank sheets of candidates through download.
10. Post exam biometric finger print authentication during the counseling.
11. Handover process with our Institution on the above activities completed.
12. Any document required for RTI purposes with Audit Trail.

We anticipate a quality delivery from your end on the above work order.

Kindly provide your acknowledgement of the above work order in a written response.

This work order is issued with the approval of the Director.

DEAN (Academic)
Jawaharlal Institute of Postgraduate
Medical Education & Research
PUDUCHERRY - 605 006.

डीन का कार्यालय
जिपमेर
JIPMER
पुडुच्चेरि
Puducherry-6
OFFICE OF THE DEAN

TATA CONSULTANCY SERVICES LTD.
MUMBAI

U.P. RAJYA VIDYUT UTPADAN SEWA AAYOG
U.P. RAJYA VIDYUT UTPADAN NIGAM LTD.

UPRVUNL

(An Undertaking of U.P. Government)
ROOM NO.1025, 10th FLOOR, SHAKTI BHAWAN EXTENTION,
14-ASHOK MARG, LUCKNOW-226001
CIN: U40101UP1980SGC005065

No. 386 - UPRVUSA/UNL/U-24/UPJVNL/2016 **Dated: 26/07/2016**

M/s Tata Consultancy Services,
TCS Awadh Park, Vibhuti Khand,
Gomti Nagar, Lucknow-226010.

Subject: Work Order for selection of various post of Uttar Pradesh Jal Vidyut Nigam Limited.

In reference to this office letter No. 360 UPRVUSA/UNL/U-24/UPJVNL/2016 dated 05.07.2016 and your consent letter No.TCS/UPRVUNL/05 dated 15.07.2016 an order is hereby placed on you for conducting Computer Based Test (CBT), Type Test, Interview etc. (end to end process) as per requirement of UPJVNL. Details of number of vacancies are given below. Selection to these Posts shall be made through various advertisements:-

Details of number of vacancies:-

Sl. No.	Name of Post	Branch	Post Code	Total Post	Selection Process
1	Assistant Engineer (T) (E & M cadre)	Electrical	01	7	CBT & Interview
		Mechanical	02	7	
		Electronics & Instrumentation	03	4	
2	Assistant Engineer (T) (Civil cadre)	Civil	04	2	
3	Junior Engineer(T) (E & M cadre)	Electrical	05	24	CBT & documents verification
		Mechanical	06	12	
		Electronics & Instrumentation	07	08	
4	Junior Engineer (T) (Civil cadre)	Civil	08	20	
5	Technician Grade-II	Electrician	09	65	
		Fitter	10	60	
		Instrument	11	28	
6	Medical Officer	-	12	04	Interview
7	Personnel Officer	-	13	01	CBT & Interview
8	Assistant Law Officer	-	14	01	
9	Computer Operator	-	15	06	CBT, Typing & documents verification
10	Accounts Clerk	-	16	10	CBT & documents verification
11	Stenographer Grade-III	-	17	20	CBT, Typing & documents verification
12	Asst. Review Officer	-	18	04	CBT, Typing & documents verification

TATA CONSULTANCY SERVICES LTD. MUMBAI