

**PROSPECTUS FOR  
B.TECH(LATERAL ENTRY) ADMISSION 2023-24**

Approved vide

dated

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## **B.TECH LATERAL ENTRY COURSE 2023-2024**

### **1. Introduction**

Lateral Entry Scheme is intended to admit meritorious Diploma/D.Voc/B.Sc holders to the Third Semester of the B. Tech courses to acquire a Degree in Engineering. Lateral Entry Scheme is approved by Government of Kerala as per G.O (MS) No.156/2002/H.Edn dated: 13.11.2002 and G.O(Rt)No.1305/2019/H.Edn dated 26.07.2019 for 10% of the sanctioned seats, which shall be over and above, supernumerary to the total seats plus the unfilled vacancies of the first year (lapsed seats of first year). A state level Entrance Examination for the selection is suggested to maintain uniformity among various schemes of Diploma/D.Voc /B.Sc holders.

### **2. Institutions, Courses and Intake**

The list of various Engineering colleges, the courses/branches offered and the number of seats available in each branch will be published in the website–[www.lbscentre.kerala.gov.in](http://www.lbscentre.kerala.gov.in) before the ensuing online allotment.

### **3. Fee Structure**

Fee for the various courses in Government/Aided/Government controlled/Private Self financing Colleges will be as fixed by the Government from time to time. Students will be liable to pay the fees and all other charges as per statutes. Fees structure of various courses in Government/Aided Engineering (merit seats) colleges are given in Annexure A of the prospectus.

### **4. Eligibility for admission**

#### **4.1 Academic Eligibility**

Candidates who have passed Three years/Two years(Lateral Entry) Diploma in Engineering and Technology OR D.Voc awarded from StateBoard of Technical Education / Universities or Institutions under Govt. of India, or undergoing studies at AICTE approved institutions OR Candidates who have passed B.Sc degree from a recognized university as defined by the UGC with Mathematics at 10+2 are eligible to apply for the Lateral Entry Test subject to fulfilling the requirements of minimum marks as contained clauses 4.1.1 and 4.1.2. (For students coming from diverse background, the universities will offer suitable bridge courses related to Mathematics, Physics, Engineering drawing etc to achieve desired learning outcomes of the programme).

The admission will be subject to regulations prescribed in the prospectus for B.Tech Lateral entry course 2023-24, and of the Universities concerned.

Diploma and B.Sc qualified students will be admitted to any branch of B.Tech, subject to having qualified in the respective Lateral Entry Test.

#### **4.1.1 Diploma /DVoc Candidates**

- a) Candidates who have passed diploma in Engineering/ Technology with at least 45% marks (40% in the case of candidates belonging to SC/ST/SEBC categories) are eligible for admission to B.Tech(Lateral Entry) course. Candidates should upload mark list of the Diploma stream examination or a certificate

showing the duration of the course and the details of the certificate issuing authority properly authenticated by the head of the institution concerned if the same is not specifically stated in the certificate.

- b) Candidates who have passed D.Voc (Vocational Diploma) stream in the same and allied sector in Engineering /Technology with at least 45% marks (40% in the case of candidates belonging to SC/ST/SEBC categories) are eligible for admission to B.Tech(Lateral Entry) course. Candidates should upload mark list of the D.Voc stream examination or a certificate showing the duration of the course and the details of the certificate issuing authority properly authenticated by the head of the institution concerned if the same is not specifically stated in the certificate.

Those who are appearing for the Final year of Diploma stream / D.Voc stream / B.Sc stream Examination and satisfying the above criteria are also eligible to apply, subject to the condition that they will produce the Qualifying Certificate (original or Provisional) at the time of admission. All such candidates should upload a certificate showing the duration of the course with the details of the certificate issuing authority and properly authenticated by the head of institution concerned.

- 4.1.2 Candidates who have passed BSc Degree from a recognized University with at least 45% marks (40% in the case of candidates belonging to SC/ST/SEBC categories)and passed 10+2 examination with Mathematics as a subject are eligible for admission to B.Tech(Lateral Entry) course. Provided that the students belonging to B.Sc stream shall clear the subject i) Engineering Graphics/Engineering Drawing and ii) Engineering Mechanics of the First year Engineering programme along with the second year subjects. Candidates should upload mark list of the B.Sc stream examination or a certificate showing the duration of the course and the details of the certificate issuing authority properly authenticated by the head of institution concerned, if the same is not specifically stated in the certificate.

*The students belonging to B.Sc stream shall be considered only after filling the supernumerary and the unfilled vacancies of the first year B.Tech / BE, with students belonging to the Diploma stream and D.Voc stream.*

- 4.1.3 Candidates who have acquired/are acquiring the diploma/D.Voc eligibility from Board outside Kerala State or Board outside India should upload equivalency certificate from Directorate of Technical Education. Matters of eligibility/equivalency will be resolved as per the provisions in the G.O(MS) No. 272/2018/HEdn dated 13.11.2018. No equivalency/eligibility/recognition is required upon degrees obtained from institutions recognized by the UGC.

#### **4.2 Age**

Applicants should have completed 18 years of age as on the 31<sup>st</sup> December 2023. No relaxation in the minimum age will be allowed. However there is no upper age limit.

#### **4.3 Nativity**

Only Indian citizens are eligible to apply in all categories of seats in B.Tech (LET) admission. Candidates seeking admission to the courses will be categorized as Keralites and Non- Keralites. Non-Keralite candidates will be considered for 'State Merit' seats under Government seats and Management Quota seats. They will not be eligible for Communal/ Special/Persons with Disabilities reservation or any fee concession.

##### **4.3.1 Certificates to prove Nativity**

**Keralites:** In order to prove that candidate is an Indian Citizen of Kerala origin for the limited purpose of eligibility for admission, he/she should produce one of the following certificates along with the print out of the application itself.

i) The true copy of the relevant page of Secondary School Leaving Certificate of the candidate showing the place of birth in Kerala.

OR

ii) The true copy of the relevant page of the Secondary School Leaving Certificate of either of the parents of the candidate showing Place of Birth in Kerala with corroborative certificate to establish the relationship between the parent and the candidate.

OR

iii) The true copy of the relevant page of the Passport of the candidate, issued by Government of India, showing Place of Birth in Kerala, or of either of the parents of the candidate showing Place of Birth in Kerala with corroborative certificate to establish the relationship between the parent and the candidate.

OR

iv) A certificate of birth from the authority competent to register birth (Panchayat/ Municipality/ Corporation) showing the candidate's or either parent's (in which case corroborative certificate to establish the relationship between the parent and the candidate is necessary) place of birth in Kerala, to be issued by a competent registering authority.

OR

v) A certificate from the Village Officer/ Tahsildar to show that the candidate or his/her father/mother was born in Kerala (This is to be obtained in the prescribed format along with the printout of the application).

OR

vi) A Certificate from the competent authority showing that the parent of the candidate is an All India Service officer allotted to Kerala cadre.

## 5. Reservation of seats

All seats under Lateral Entry scheme will be filled from the common rank list prepared by the Director, LBS Centre for Science and Technology for the LET Admission 2023.

In Government Engineering Colleges all seats under Lateral Entry scheme will be allotted as Government seats.

15% of seats under Lateral Entry are reserved as Management seats in Aided Engineering Colleges and remaining 85% will be allotted as Government seats.

50% of seats under Lateral Entry will be allotted as Government seats and 50% seats are reserved as Management seats in Self Financing Engineering Colleges.

The availability of seats will be announced before the ensuing online admission.

### (A) Special Reservations

One seat each is reserved for Electronics and Communication Engineering, Electrical & Electronics Engineering, Civil Engineering, Mechanical Engineering, Computer Science & Engineering, and Information Technology branch for the children of **Serving Defense personal (SD)/ Para Military force personal (RP)**. For claiming reservation in this quota, the certificate obtained from the concerned authority not earlier than six month from the last date of receipt of application in the prescribed format (Annexure H) should be uploaded. If seats remain vacant in the above category (SD/RP) for want of eligible applicants, applications from the **children of Ex-servicemen or an**

**Ex-serviceman** himself/herself (XS) shall be considered. For claiming reservation in this quota, the certificate obtained from concerned authorities in the prescribed format (Annexure I) should be uploaded. This certificate should clearly show that the benefit of reservation has not been granted earlier to any member in the family.

**(B) Reservation for Persons with Disability(PWD)**

Leaving the seats set apart under item (A), 5% seats are reserved in Govt/Aided/Govt Cost Sharing colleges for candidates in benchmark disabilities as stipulated in section 32, chapter VI of the Persons with Disabilities Act 2016. Candidates claiming reservation under this quota shall have a minimum of 40% disability. A disability certificate from the District Medical Board has to be attached along with the application. Such candidates are also directed to produce a certificate obtained from a Medical officer not below the rank of Assistant Surgeon to ensure the fitness of candidates to undergo the course at the time of admission.

**(C) Mandatory Reservation**

Leaving the seats set apart under items (A) and (B), from the total seats, the remaining seats will be distributed as per the mandatory reservation principle as contemplated in G.O.(P)208/66/Edn. dated 2.5.1966, G.O.(MS) No. 95/08/SCSTDD dated 06/10/2008, G.O(MS)No.10/2014/BCDD dated 23/05/2014 , G.O(MS) No. 128/2020/HEdn dated 20.3.2020 and as modified from time to time. Detailed list of communities under these categories are included in Annexure C, D, E, F and G. The percentage break up of seats as per mandatory reservation are as follows:

**I. For Govt/Aided and institutions other than minority.**

Sl.No	Category	Percentage
(i)	State Merit (SM)	50%
(ii)	Economically weaker Sections in General Category(EWS)	10%
(iii)	Socially and Educationally Backward Classes	30%
	a Ezhava (EZ)	9%
	b Muslim (MU)	8%
	c Other Backward Hindu (BH)	3%
	d Latin Catholic and Anglo Indian(LC)	3%
	e Dheevera and related communities (DV)	2%
	f Viswakarma and related communities (VK)	2%
	g Kusavan and related communities (KN)	1%
	h Other Backward Christian (BX)	1%
	i Kudumbi (KU)	1%
(iv)	Scheduled Castes and Scheduled Tribes	10%
	a Scheduled Caste (SC)	8%
	b Scheduled Tribe (ST)	2%

**II. For Institutions having minority status**

Sl.No	Category	Percentage
(A)	State Merit	60%

(B)	Socially and Educationally Backward Classes	30%
a	Ezhava (EZ)	9%
b	Muslim (MU)	8%
c	Other Backward Hindu (BH)	3%
d	Latin Catholic & Anglo Indian (LA)	3%
e	Dheevera and Related communities (DV)	2%
f	Viswakarma and related communities (VK)	2%
g	Kusavan and related communities (KN)	1%
h	Other Backward Christian (BX)	1%
i	Kudumbi (KU)	1%
(C)	Scheduled Castes & Scheduled Tribes	10%
a	Scheduled Casts (SC)	8%
b	Scheduled Tribes (ST)	2%

## 6. Claim for Communal Reservation:

Claims for Special/Mandatory reservations must be made by a candidate in the online application and the supporting documents shall be uploaded within the stipulated time. **The claim has to be specified in the application in the respective places.** Claims made after the last date of submission of application will not be entertained even if supporting evidences are produced. The claims for Special and Mandatory Reservation once made in the application cannot be altered by the candidate under any circumstances after final confirmation.

**(A) State Merit:** The seats under the State merit will be filled purely on the basis of merit (State wide) irrespective of the category/community to which the candidates belong.

### **(B) Claim for Communal Reservation under Socially and Educationally Backward Classes (SEBC)**

Reservation to the Socially and Educationally Backward Classes will be in accordance with the provisions contained in G.O.(P)208/66/Edn. dated 02.05.1966, G.O.(Ms) No.95/08/ SCSTDD dated 06.10.2008, GO(MS) No. 10/2014/BCDD dated: 23.05.2014, G.O.(P) No. 1/2015/BCDD dated: 01.01.2015, GO(MS) No. 4/2015/H.Edn. dated: 05.01.2015, GO(MS) No. 15/2015/H.Edn. dated: 19.01.2015, GO(MS) No. 03/2018/BCDD. dated: 09.04.2018, GO(MS) No. 05/2020/BCDD. dated: 16.03.2020 and as amended from time to time and will be in accordance with the Orders of the Hon'ble Supreme Court of India/ Hon'ble High Court of Kerala or Orders of the Government of Kerala/ Government of India.

- Candidates belonging to Socially and Educationally Backward Classes as per G.O.(P) 208/66/Edn. dated 02.05.1966, GO(MS) No. 10/2014/BCDD dated: 23.05.2014, G.O.(P) No. 1/2015/BCDD dated: 01.01.2015, GO(MS) No. 4/2015/H.Edn. dated: 05.01.2015 and GO(MS) No. 15/2015/H.Edn. dated: 19.01.2015 should upload to the online application, a certificate to the extent that the candidate belongs to the community which is designated as a Socially and Educationally Backward Class and does not belong to the category of Creamy Layer, in the proforma given as Annexure VIII of the G.O.(P) No. 1/2015/BCDD dated: 01.01.2015. The names of castes and communities under SEBC are given in Annexure G. Only the claims of the candidates of those communities that are included in the list as incorporated in the respective Annexure G of the Prospectus 2023 will be considered. Claims by candidates belonging to other communities, which are not included in the Annexure G, will be rejected even if certificates from the concerned Revenue Officers have been obtained and uploaded to the online application.
- Candidates belonging to Ezhava, Muslim, Other Backward Hindus, Latin Catholic & Anglo Indians, Dheevera and related communities, Viswakarma and related communities, Kusavan and related

communities, Other Backward Christian and Kudumbi communities, claiming reservation under SEBC Quota should invariably **upload Non-Creamy Layer certificate in the prescribed format for State Government Education purpose** obtained from the Village Officer concerned.

- (c) Reservation under SEBC for children of inter-caste married couples: Children of Inter-caste married couple with either the father or mother belonging to a community included in SEBC list, or with father and mother belonging to different communities, both of which are included in the SEBC list, are eligible for reservation under SEBC. Such candidates should upload a Non-Creamy Layer certificate for State Education Purpose specifying the community of the candidate from the Village Officer.
- (d) Candidates who are children of Inter-Caste married couple of whom one is SC/ST, will be eligible for educational and monetary benefits admissible to SC/ST as per Para 2 (ii) of G.O.(MS)No.25/2005/SCSTDD dated 20.06.2005, if eligible for reservation under SEBC, will be granted the same, based on the Non-Creamy Layer Certificate for State Education Purpose obtained from the Village Officer and the inter-caste marriage certificate issued by the Tahsildar to be uploaded to the online application. Candidates claiming SC/ST reservation who are children of Intercaste married couple of whom one is SC/ST, should upload the Extract of First standard school admission register showing the caste/community and the relevant page of secondary school leaving certificate also. If the candidate is not from the Kerala SSLC stream, relevant page of the School Leaving Certificate of the parents should be uploaded.
- (e) The candidature/ allotment/ admission of the candidates who furnish fake Non-Creamy Layer certificates are liable to be cancelled. Such candidates are also liable to be debarred from appearing for the Entrance Examination for a period extending upto two years.

**(C) Claim for Reservation under Scheduled Castes/Scheduled Tribes Quota**

- (i) Scheduled Caste/Scheduled Tribe candidates should obtain the caste/ community certificate from the Tahsildar which should be uploaded while submitting the application. SC/ST community status of children of parents contracted inter-caste marriage will be subject to the orders/clarification issued in G.O(MS) No.25/2005/SCSTDD dated 20- 06-2005 and the judgment dated 10-08-2005 of the Full Bench of the Hon'ble High Court of Kerala in WP 2483/2005 and connected cases and G.O(MS) No.109/2008/SCSTDD dated 20.11.2008.
- (ii) As per G.O.(MS)No.109/2008/SCSTDD, dated 20.11.2008, the children born of inter- caste married couple of which one of the parents is SC/ST can claim the status of SC/ST on proof of the conditions of acceptance, customary traits and tenets under which such children are brought up.
- (iii) The competent authority issuing SC/ST community certificate to children born of inter-caste married couple, of which one of the parents is SC/ST, should ensure that the claimant is subjected to same social disabilities and following the same customs and traditions and the community has accepted that person to its fold as such. The authority to issue caste certificate should also ensure that
  - (a) Each case shall be examined individually in the light of the existing facts and circumstances.
  - (b) The claimant has suffered disabilities – socially, economically and educationally.
  - (c) The society has accepted the claimant to their original fold as one among them and is living in the same social tenet.

The Christian converts who have subsequently embraced Hinduism should upload community/caste certificate while submitting the application. The following certificate should also be got recorded by the revenue official below the certificate “The certificate is issued after observing the guidelines issued in Government Circular No.18421/E2/SC/ STDD dated 15.12.1987”.



The names of castes and communities are given in Annexures C and D. For claiming SC/ST reservation Community Certificate from Tahsildar is to be obtained in the prescribed format and uploaded to the online application

- (iv) The applications for the reserved seats of Scheduled Castes/Scheduled Tribes candidates which do not contain SC/ST Certificate (Community Certificate) from the Tahsildar in the prescribed format to the online application will not be considered on any account for claiming community reservation against the seat reserved for SC/ST candidates (vide G.O.(MS) 31/90/SCST/DD dated 25.05.1990).

**The community certificate should clearly specify that the candidate himself/herself (not the father or mother) belongs to the Scheduled Castes/Scheduled Tribes. The community certificate as per G.O.(MS) No.136/07/RD, dated 27.04.2007 will be accepted.**

The candidates who are reconverted to Hinduism from Christianity, of Scheduled Caste origin, should upload community certificate from the Tahsildar concerned, to the online application, along with a copy of Gazette Notification regarding re-conversion. Such candidates should also upload the Sudhi Certificate and relevant page of the school documents of the candidate and his/her parents

- (v) The SC/ST claims in respect of those who have migrated from one State to another will be subject to the provisions of G.O (MS) No.10/86/SC/STDD dated 12.2.1986. Only the children of those who had migrated to this State before the promulgation of the Constitution (Scheduled Castes) Order 1950 and the Constitution (Scheduled Tribes) Order 1950 and ordinarily reside in this State can claim SC/ST benefits from the State of Kerala. They must be able to prove this, if required.

**Claim of OEC candidates against the unavailed seats of SC/ST candidates:** Other Eligible Community (OEC) candidates are eligible for the unavailed seats, if any, under SC/ST quota, as per G.O(P) No. 135/87/H.Edn, dated 06.05.1987. They should specify their community status in the application. Such candidates should upload "Non-Creamy Layer Certificate" for State Government Education Purpose from the authority concerned as per G.O(P)No.1/2015/BCDD dated 1/1/2015 and G.O(Ms)No.4/2015/H.Edn dated 5/1/2015. Relaxation in marks in the qualifying examination as in the case of SEBC candidates will be applicable to OEC candidates (As per G.O(P) No.53/2000/SCSTDD dated 03.07.2000). The list of Other Eligible Communities is given in **Annexure E** of the Prospectus.

**WARNING:**

1. Those who produce false SC/ST Certificate for claiming reservation under SC/ST quota shall be liable for the penalties stipulated in Section 15 of the Act referred to in Clause(C) above. Candidates and their parents who make such applications are warned that in addition to prosecution they will have to suffer the following consequences, in case the SC/ST certificate produced is found to be false and the candidate does not belong to any SC/ST communities, under Section 16 of the Act "Benefits secured on the basis of false community certificates will be withdrawn:"
2. Whoever not being a person belonging to any of the Scheduled Castes or Scheduled Tribes secures admission in any educational institution against a seat reserved for such castes or tribes or secures any appointment in the Government, Government Undertakings, Local Authority or in any other Company or Corporation owned or controlled by the Government or in any aided institution against a post reserved for such castes or tribes or enjoys any other benefits intended exclusively for such castes or tribes by producing a false community certificate shall, on cancellation of the false community certificate, be removed by cancelling the irregular admission in the concerned educational institution, or as the case may be, removed from the said service forthwith and any benefit enjoyed by him as aforesaid shall be withdrawn forthwith.
3. Any amount paid to such person by the Government or any other agency by way of scholarship, grant, allowance, stipend or any other financial benefit shall be recovered as if it is arrears of public revenue due on land.

4. Any degree, diploma or any other educational qualifications acquired by such person after securing admission in any educational institution on the basis of a false community certificate shall also stand cancelled on cancellation of the community certificate obtained by him.

**(D) Claim for reservation of candidates belonging to general candidates, who are classified as EWS**

To avail reservation for Economically Weaker Sections in general category (EWS) the candidates should upload necessary certificates from concerned Village officer (Annexure K/Annexure L) to be considered under this category. The annual family income for EWS category candidates shall not exceed Rs.4 lakhs (Four Lakhs). There is no income limit to those EWS candidates belonging to Anthyodaya/Annayojana and Priority House Hold.

*Note: i) The Certificate issued by the e-District portal of the Government of Kerala will be preferred in lieu of the respective certificates.*

*(ii) Validity Period of Community, Non Creamy Layer and Income certificates will be as per the relevant guidelines of the revenue department.*

**7. Claims for Fee Concessions**

1. **Claim for fee concession to OEC Candidates listed in Annexure E :** Candidates belonging to Other Eligible Communities are exempted from payment of fee at the time of allotment to professional Degree Courses under Government/Community quota as per G.O. (MS) No. 36/07/SCSTDD dated 03.07.2007. Those OEC candidates who have uploaded the Non-Creamy Layer Certificate for availing the applicable reservation will be granted the fee concession based on the Non-Creamy Layer Certificate. But those OEC candidates who do not come under Non-Creamy Layer Category should upload the Community Certificate obtained from the village officer to the online application for availing the fee concession.
2. **Claim for fee concession to the candidates belonging to communities listed in Annexure F :** Candidates belonging to the communities listed in Annexure F whose annual family income is up to **Rs.6 lakhs** are exempted from payment of fee at the time of allotment to Professional Degree Courses under Government/Community Quota as per GO (MS) No. 10/2014/BCDD dated: 23.05.2014. They should upload Community and Income Certificates from the Village Officer in the prescribed format to the online application.

**8. TUITION FEE WAIVER SCHEME (TFW)**

There are a maximum of 5% seats supernumerary in nature under Tuition Fee Waiver (TFW) scheme. It is provided to women, physically handicapped and Other Eligible (Economically weak) students from any of the background (GEN/OBC/SC/ST) to be admitted in Degree program of the institute.

Following are main features of the Scheme:

Sons and daughters of parents (Father and Mother both) whose annual income is up to Rs 8.00 lakhs from all sources shall only be eligible.

The waiver is limited to the Tuition Fee only. All other fee (except Tuition Fee) will have to be paid by the beneficiary student.

Applications are invited during registration; but shall be taken into consideration after completion of second phase of document verification. The beneficiary student admitted under this scheme shall not be allowed to change the course (Branch/Discipline) under any circumstances.

The scheme shall come into effect once 30% seats of sanctioned seats are filled and the institute is able to fill supernumerary seats as per scheme. Students who want to avail the scheme must get the income certificate from the competent authority issued on or after 31.03.2022.

## 9. HOW TO APPLY

### 9.1 Availability of Prospectus

The prospectus is available in the website [www.lbscentre.kerala.gov.in](http://www.lbscentre.kerala.gov.in). Candidates seeking admission to the course have to apply online through the website [www.lbscentre.kerala.gov.in](http://www.lbscentre.kerala.gov.in) of the Director of LBS Centre for Science and Technology.

**9.2 Application Fee:** For General candidates is **1000/-** (Rupees One Thousand Only). In the case of SC/ST candidates and those eligible for SC/ST benefits as per G.O. (MS) No.25/05/SCSTDD dated 22.06.2005, the application fee is **Rs.500/-** (Rupees Five Hundred Only). Application fee can be remitted at any one of the branches of the Scheduled Bank (to be notified) in Kerala.

### 9.3 Submission of Application:

Online application form is available in the website [www.lbscentre.kerala.gov.in](http://www.lbscentre.kerala.gov.in). Application along with supporting documents has to be submitted online. Application or supporting documents submitted by any other means will not be considered. All the mandatory and supporting documents must be uploaded to the online application form.

Candidate has to visit the website [www.lbscentre.kerala.gov.in](http://www.lbscentre.kerala.gov.in) and click the link **Various Allotments**. In the page thus obtained click on the link **Admission to B.Tech Lateral Entry 2023-24**.

#### Step 1: Registration

Candidate should click the button “**NEW CANDIDATE**”. The personal details of the candidates have to be filled in the page thus obtained. All the basic information, required in the application are to be filled in at this step. Before filling the details, read the Prospectus carefully. The data provided here will be used for processing the application. Any mistake in filling this sheet or providing false/incomplete/wrong information will affect the candidate’s eligibility for admission or claim for reservation under any category. It is obligatory that the candidate should fill all the items in the registration stage. If the data is filled completely, after confirming that all the information given are correct and true, click the **Save and Continue** button to complete the registration process.

#### Step 2: Fee payment

At this step, the candidate has to make the payment of application fee by way of Online or by way of Challan.

Select the Mode of Payment

#### A. Online Payment

The fee may be paid by credit card/debit card/Internet Banking. On successful payment of fee, a Payment Confirmation page will appear displaying the message ‘Transaction Successful’. This page

will display the Application number, Transaction Id, Challan number, Date and Amount. **Candidate should note this application number and challan number which will be required for future LOGIN.** If the payment is unsuccessful, the message ‘Transaction Unsuccessful’ will be displayed. Due to communication failure, if the outcome of the payment attempt is not displayed, the Bank may be contacted to ensure whether the attempt was successful or not. If not, the transaction was unsuccessful and the payment needs to be made again and ensure that it’s successful. If the amount was debited from the account of the candidate for an unsuccessful transaction, the debited amount will be reverted to that account within 5-7 working days. After successful payment the candidate can resume filling of application.

## **B. Challan Payment**

When mode of payment by challan is selected, a three part challan form (Candidate copy, office copy and Bank Copy) will appear on the screen. Candidate has to take a print out of the challan, produce the same in the bank and remit the requisite application fee at any branch of the designated bank (which will be notified later). The Challan will contain the system generated application number which the candidate should note for future login purpose.

After the remittance of fee in the bank, he /she will get back the candidate copy of the challan from the bank. The candidate copy of the challan is to be retained by the candidate.

A candidate who remitted the fee by way of challan can continue with step 3 on the next day or within the prescribed time limit for completion of the online application submission process. The candidate has to click the button LOGIN (FEE REMITTED CANDIDATE) button. In the page thus obtained he/she has to enter the Application Number, Date of remittance, Branch and challan number regarding the fee remittance if logging in for the first time. Now facility will be provided for creating password.

**Candidate should note the Registration Id and password which are required for future login and should keep them confidential.**

### **Step 3: Application Entry and uploading of Photograph/Signature/Certificates/Documents**

The candidate should fill all the remaining items in the application entry stage.

A recent passport size photograph of the candidate and Signature of the candidate, all in jpeg format of given specifications are to be uploaded (Refer Annexure M for guidelines). In addition all the certificates and documents in support of the various claims made in the application should be uploaded. Nativity proof as stipulated in clause 4.3 and proof for date of birth are mandatory. When a candidate selects an option in the application, the button to upload the corresponding certificate/document, if any, required, will be activated against that option. If more than one document have to be uploaded for a single claim, all the documents should be converted into a single PDF file and uploaded.

### **Step 4: Final Confirmation and Print Application**

After completing step 3, the candidate can ‘Preview’ the application before confirmation and submission. After Preview the candidate has to accept the declaration and make final submission. The facility to accept the declaration (Tick box) will be enabled only if all the mandatory fields are filled and uploading of supporting documents and images are completed. Candidate should then take a printout of the Application Form page from the online application for future references.

The candidate will get an acknowledgement following the Final Confirmation. Candidate can take a printout of this acknowledgement or make a note of the acknowledgement number for future reference.

***Applications of candidates who have not made final confirmation will be considered incomplete and will not be considered under any circumstances.***

Applications should be complete in all respects. A candidate will be considered eligible for positioning in the Ranklist, only if he/she has uploaded the relevant certificates prescribed in the Prospectus, in proof of eligibility, or in support of any claim for reservation, under any category. Candidates are directed to keep a copy of the printout of Application Form page of the online application for future reference. Do not send the printout of the page and supporting documents to the Office of Director, LBS Centre by post /e-mail/ in person. Candidates are liable to produce all the original documents at the time of admission at the concerned allotted institution.

#### **9.4 CERTIFICATES/ DOCUMENTS TO BE UPLOADED ALONG WITH THE APPLICATION**

1. copy Scanned of the S.S.L.C book or any other relevant record to prove date of birth.
2. Any one of the certificates as per clause 5(a) to prove nativity.
3. Documents to prove Academic Eligibility: Degree/Diploma Certificate / Final Year/Semester Marklist/ Hall Ticket of Final Year/Semester qualifying examination.
4. Scanned Copy of Non Creamy Layer Certificate if applicable
5. Scanned Copy Community Certificate if applicable.
6. Scanned Copy Inter-Caste marriage certificate in the prescribed format, if applicable
7. Scanned copy of Certificate from the Medical Board for Persons with Disabilities.
8. Scanned copy of Income & Community Certificates in the prescribed format if applicable
9. Scanned copy of EWS Certificate issued by Village officer (Applicable to general community candidates, claiming EWS reservation).
10. Any other documents mentioned in the Notification of the Director, LBS Centre for Science and Technology.

**Note: All certificates required such as community, nativity, minority etc. will also comply to GO(P)No1/2021/PIE&MD dated 7.10.2021 with all the provisions thereof.**

**Validity of Certificates:** The validity of various certificates will be as given in the following table:

<b>Sl. No</b>	<b>Certificate</b>	<b>Validity (as on Closing Date of application)</b>
1	Non Creamy Layer Certificate	One year
2	Community Certificate & Minority Certificate	Three years
3	Income Certificate	One year

***Certificates issued after the closing date of application will not be considered***

**WARNING:** *Incomplete applications with defective or incomplete certificates or without signature/office seal of the issuing authority will be rejected. No opportunity will be given to incorporate any certificates after submission of the online application/details*

## 10 Entrance Examination:

A State level OMR based objective type Entrance Examination for duration of two hours will be conducted by The Director, LBS Centre for Science and Technology, Thiruvananthapuram for the selection.

Examination centers will be at Thiruvananthapuram, Kollam, Alappuzha, Pathanamthitta, Kottayam, Thodupuzha, Ernakulam, Thrissur, Palakkad, Malappuram, Sulthan Bathery, Kozhikode, Kannur & Kasaragod. All candidates who have applied successfully can appear for the entrance examination. Admission to the examination is purely provisional and no claim for admission to the course will be entertained if the conditions in the notification are not met. Admit Cards for the Examination can be downloaded from the website [www.lbscentre.kerala.gov.in](http://www.lbscentre.kerala.gov.in). Admit cards will not be sent by post.

The Entrance Examination will be as per the syllabus based on First year B.Tech curriculum of Kerala Technological University (KTU). The syllabus for the entrance examination is included as Annexure J. The rank list will be published by The Director, LBS Centre for Science and Technology, Thiruvananthapuram.

The rank list for admission to the course will be published on the basis of the total marks secured by the candidates for the Entrance Examination. Those who have secured zero marks will not be included in the rank list. There is no negative mark in the valuation of answer scripts of entrance examination. For every correct answer candidates will get one mark and no reduction of mark (negative mark) for the wrong answers.

## 11 Valuation and Declaration of Results:

A fully computerized system has been adopted for the valuation of the answer scripts using Optical Mark Reader (OMR) system and for the results.

The rank list shall be prepared as per the criteria given in Annexure B. There will be no provision for revaluation or rechecking of the answer scripts or recounting of the marks.

## 12 CENTRALISED ALLOTMENT PROCESS (CAP)

The Allotment Process will be done through a Single Window System (SWS) of Allotment to give allotments to the various Government/Aided/Cost sharing Colleges under Govt. Control /Private Self Financing Colleges, based on the options submitted online by the candidates who have been included in the rank list for admission to the B.Tech Lateral Entry 2023-24, Kerala. It is a simple and transparent process of allotment to the courses and it gives the candidate opportunity to exercise his/her options for colleges of his/her choice conveniently in the order of his/her preference considering all those available to be chosen from. The allotments will be strictly based on the options exercised, the rank obtained and eligible reservations of the candidate. Candidates should register options only to those colleges, which they are sure to join on allotment.

- 12.1 (a) The Single Window System of Admissions for the B.Tech Lateral Entry 2023-24 will be done by the Director, LBS Centre for Science and Technology.
- (b) Seats in the Government/ Aided/ Cost sharing Colleges under Govt. Control /Private Self Financing Colleges to be allotted by the Director, LBS Centre for Science and Technology will be included in the Single Window System (SWS) and will be done as per the provisions of allotment.
- (c) Candidate to register options: Options can be registered only through the website, [www.lbscentre.kerala.gov.in](http://www.lbscentre.kerala.gov.in). Candidates included in the B.Tech Lateral Entry 2023-24 rank list will

have to register their options in the '**Home Page**' of the candidate through the website within the stipulated period of time. Candidates can access this website and follow the instructions given therein to register their options for colleges. *Options submitted to the Director, LBS Centre for Science and Technology by Fax, Post, Hand Delivery etc., will not be processed or considered on any account for allotment of seats.*

- (d) Time schedule for registering options: The facility for registering of options will be available only during the period specified in the notifications to be issued by the Director, LBS Centre for Science and Technology. Wide publicity will be given through electronic and print media regarding the schedule and related matters. The facility will be withdrawn once the time period is over *and candidates will not have access to this facility after this time period. A candidate, not registering his/her options as per the time schedule announced, will not be considered for allotments under any of the seats available then, irrespective of his/her rank.*
- (e) Eligibility for registering options: Only those candidates included in the rank list published by the Director, LBS Centre for Science and Technology for B.Tech Lateral Entry 2023-24 based on the Entrance Examination are eligible to register their options online. Moreover, the candidates registering their options should satisfy all the eligibility conditions with regard to Nativity (Clause 5(a)), Academic qualifications (Clause 5(b)) etc., of the prospectus for admission to B.Tech Lateral Entry 2023-24.
- (f) Colleges available for registering options: The list of Colleges for allotments through the SWS will be available in the website. The 'Option Registration' link when clicked will show all the Government/ Aided/ Cost Sharing Colleges under Govt. Control/ Private Self Financing Colleges, Total Seats and Course fee applicable to the candidate.
- (g) How to register options in his/her Home Page: By entering the option number for a college, the candidate can type his/her preference numbers for the colleges displayed. Here all the eligible options of the candidate will be displayed and the candidate is expected to enter his/her preference number for a particular college.
- (h) Registering of the Options and saving/revising the Options registered: All eligible options of the candidate will be displayed. The candidate may follow the directions given therein to register the options. The data entered may be saved regularly by clicking the '**Save**' button, so that the data already entered is not lost due to unexpected reasons. The candidate should enter only those options in which he/she is interested. Candidates should also note that he/she will be considered for allotment only to those colleges opted by him/her. So, a candidate who has not opted for a college will not be considered for allotment to that college. The registered options will be displayed in the order of preference number under the title "Selected College Preference List". The registered options can be cancelled by entering the number '0' or by clicking 'Remove' button against that particular option to be cancelled and click the 'Save' button. All options registered by the candidate will be processed. If a candidate gets allotted to a particular seat, based on his/her option, he/she is bound to accept it, failing which, he/she will lose that allotment.
- (i) Viewing and Printing of the Option List based on the options registered: Once the candidate completes the option entry, he/she can view his/her options by clicking on the link provided. **An option list will be generated and the candidate can take a printout of the same and keep it for future reference.** If the candidate wants to change his/her options already registered, he/she may revise the options as desired and ensure that the option list has come as per his/her preference.
- (j) Logging off from the Home page: Once the candidate is satisfied with the options registered, he/she should 'Log off' the system by clicking on "logout" link. The process of 'Registration of Options' is complete when the candidate logs off. This action is compulsory for preventing the misuse of his/her Home Page by others.

- (k) Rearranging option priority: A candidate may change his/her option priority any number of times within the time schedule permitted. The priority of options registered at the time of closing of the facility for registering options alone will be considered for processing.

**12.2 Processing of Options and Allotment:** After the period earmarked for registering options, they will be processed and the allotment for all colleges will be published on the website [www.lbscentre.kerala.gov.in](http://www.lbscentre.kerala.gov.in), on the date notified by the Director, LBS Centre for Science and Technology.

**Note: 1.** There will be two regular online allotments. After each allotment the candidate can pay the required token fee / additional fee as indicated in the Fee Payment Slip which will be available for download from the student home page. The fee can be paid using the fee payment slip or by online.

**Note: 2.** Those candidates who fail to remit the fee on or before the date specified will lose their current allotment and will not be considered in the remaining regular allotments. Such candidates can participate only in the Special/Spot allotments if any, conducted.

**Note: 3.** The provisional Allotment Memo will be available after the Second Allotment. Candidate can take a printout of this memo to be presented at the time of admission in the college. The candidates are required to join the college only after the second allotment as per the prescribed schedule, which will be shown in the allotment memo.

### 12.3 The First Allotment

The allotment of a candidate can be seen in the Home page of the candidate. It will show the College to which the candidate is allotted along with the fee to be remitted. Those candidates who fail to remit the fee on or before the date specified will lose their current allotment and will not be considered in the remaining regular allotments.

If a candidate is allotted his/her first option and accordingly remitted the prescribed fee, that candidate is bound to accept the allotment. However they can participate in Special/Spot allotments conducted, if any.

### 12.4 Cancellation of options/alteration of priority of options:

- 12.4.1 Candidates who remit the fees within the prescribed time limit will have the facility to cancel/alter the priority of their higher order options in the list of options registered by them before the next allotment. This facility will be activated in the 'Home Page' of the candidates on the dates notified.
- 12.4.2 After the allotment, the options below the 'allotted one' of the candidate will automatically be removed from the option list of the candidate. For example, if a candidate had registered 20 options in all, and if he/she is allotted his/her 10th option, all options from 10 to 20 will be removed from the option list. Since the 10th option is the allotted one, it will not be seen in the option list. Options from 1 to 9 only will remain valid and will be considered for future allotments.
- 12.4.3 If a candidate is satisfied with an allotment and does not want to be considered against his remaining options, he/she will have the facility to cancel all the remaining options or specific options among the remaining options as per his/her desire. The candidate will also have the facility to alter the priority of the remaining options. But the candidate will not be permitted to register any fresh option to the existing ones.
- 12.4.4 The facility for cancellation/deletion/alteration will be available as notified, after which the facility will be withdrawn. A candidate retaining all or any of his/her higher options after an allotment, is bound to accept the new allotment, if any granted. In such cases, he/she will not be permitted to retain the earlier allotment if any under any circumstances.

### 12.5 The Second Allotment

The second allotment will be published on the date to be notified. If a candidate has a different allotment than the one accepted in the previous allotment, the fee for which is higher than that remitted as per the previous



allotment, he/she will have to remit the difference in fee. The amount to be remitted in this manner will be shown in fee payment slip. If the fee for the course allotted in the current allotment is less than or same as the fee remitted as per the previous allotment, no further remittance is to be made by the candidate. Excess amount remitted by the candidate, if any, will be refunded, after the completion of the entire Allotment process.

**Provisional Allotment Memo:** After the second allotment is published, candidates can take a print of the Allotment Memo by logging in, which will be available then. The allotment memo will contain all details of the candidate along with the college to which the candidate stands allotted finally [as on the second allotment]. The candidate can take a printout of this memo to be produced at the time of admission. The allotment memo and Receipt of Fee must be produced at the time of admission along with other documents.

**Forfeiture of the claims in CAP:** The claims in Centralised Allotment Process conducted by the DIRECTOR, LBS CENTRE will be cancelled under the following reasons: (i) Non payment of tuition fee as specified in the fee payment slip. (ii) Non joining of the course/college within the stipulated time as specified by the DIRECTOR, LBS CENTRE.

## 12.6 Remittance of Fee

The prescribed fee for the course will have to be remitted by the candidate to the account of the Director LBS Centre in any one of the branches of a prescribed scheduled bank which will be notified later or by way of online payment as per the time schedule prescribed.

On remitting the fee, a fee receipt will be issued by the bank to the candidate. For online payment the fee receipt in the online payment page can be printed., which shall be produced in the college at the time of admission.

For Cash Payment, the student can click on the link 'Fee Payment Slip' in the allotment page, which will show a Slip showing the fee to be paid towards Part payment of tuition fee. The candidate will have to take a printout of this slip and pay the fee at any branches of the prescribed scheduled bank which will be notified later. The candidate shall get the fee payment slip endorsed by the bank. This shall be produced at the time of admission in the college.

To make online payment of the tuition fee the candidate can click on the related link shown on the allotment page and proceed further.

- (b) Candidates who get allotment in Government/Aided colleges will have to remit a token fee of Rs 3150/- and those who get allotment in self financing colleges will have to remit a token fee of Rs 10000/- as part of tuition fee.
- (c) SC/ST/OEC and other candidates having fee concession, who get allotment, in Government seats shall remit a token amount of Rs 100/- (as part of Caution Deposit). Those candidates who fail to remit the fee on or before the date specified will lose their current allotment as well as their chance to participate in remaining regular allotments.

### **Important**

- 1) Fee remitted by way of Demand Draft/Cheque etc. will not be accepted under any circumstances.
- 2) The list of candidates who remit fees will be updated regularly at the website [www.lbscentre.kerala.gov.in](http://www.lbscentre.kerala.gov.in). Candidates who remit fees should verify the list and ensure that their names have been included in the list. If any discrepancy is noted, the candidates should immediately bring it to the office of the Director, Lbs Centre for Science and Technology, Kerala.

**12.7 Admission to the Course:** Candidates allotted to colleges, and who have remitted the fees as prescribed, should take admission in the allotted college as per the schedule published by the Director, LBS Centre for

Science and Technology. Candidates who do not take admission will lose their current allotment. However they can participate in the special/spot allotments if any, conducted.

**12.8 Further Allotments:** Details regarding further allotments will be notified by the Director, LBS Centre for Science and Technology. **Spot/Online Special Allotments** will be conducted if necessary to fill vacant seats after the regular allotments. Candidates who have taken admission in private self financing engineering colleges must obtain Unconditional No Objection Certificate (NOC) to participate in such Spot/Special Allotments. Once the candidate gets an allotment in the spot/Online Special Allotment, he/ she will have to join the particular institution and then only he/she will be considered for further allotments. Otherwise his/ her candidature will be cancelled.

The candidate, who got subsequent allotment, must be issued TC from previous institution, and the arising vacancy has to be reported to the Director, Lbs Centre for Science and Technology.

If seats remain vacant even after the special allotments, as the case may be, the heads of the institutions are permitted to admit the candidates from the rank list prepared by the Director, LBS Centre for Science and Technology, through institutional level spot admissions by giving wide publicity in the media. Through this clause, institutions can fill vacant seats up to the last date of closing admission, which will be decided by the Director of Technical Education, Kerala.

The institutional level spot admissions will be conducted only after the conduct of all phases of the centralized Allotments, as the case may be.

### **13. Post Allotment Activities:**

(a) **Reporting at the College:** Candidates who get allotment will have to report to the Principal/Head of the Institution concerned for admission on the dates notified with allotment memo and originals of the required documents.

#### **(b) Admissions**

The selection for admission will be provisional and subject to the verification of the original documents by the concerned Principals at the time of admission.

Principal/Head of the Institution will be personally responsible for verification of eligibility conditions as prescribed in the Prospectus, when the candidate reports for admission. Only those candidates who are found to be qualified as prescribed shall be admitted to the college/institution, irrespective of the fact that he/she has an allotment through the SWS.

Any other details not specifically covered by the clauses given in the prospectus will be decided by the undersigned and his/her decision will be final. He/She is also empowered to cancel any admission found to be illegal subsequent to the admission)

#### **(c ) Documents(in original) to be produced at the time of admission**

1. Admit Card of the Entrance Examination.
2. Allotment Memo and Fee receipt.
3. SSLC or any relevant school records to prove date of birth.
4. Originals of Degree/Diploma Certificate and Mark list of all parts of the qualifying exam.
5. Originals of certificates of claims for reservation and fee concession uploaded along with the application.
6. Transfer certificate and conduct certificate from the institution where the candidate studied last.
7. Two copies of passport size photograph of the candidate.

8. **Matters of Eligibility/Equivalency will be resolved as per the provisions in the GO(Ms) No. 272/2018/H.Edn dated 13.11.2018. No equivalency/eligibility/recognition is required upon degrees obtained from institutions recognized by the UGC.**
9. Applicant who is employed or a trainee in Government service, Scheduled Bank etc. should produce, at the time of interview, a relieving order and a certificate of good conduct from the Head of the office where the applicant is employed.
10. The student who qualifies from other universities should produce migration certificate at the time of admission.

**Note:** All certificates as listed above must be produced for verification at the time of admission. Candidates will not be given any chance to produce the original documents/certificates asked for, on a subsequent occasion.

#### **14. Preventive Measures Against Ragging:**

According to the Kerala Prohibition of Ragging Act, 1998, 'ragging' means doing of any act by disorderly conduct to a student of an educational institution, which causes or is likely to cause physical or psychological harm or raising apprehension or shame or embarrassment to that student and includes teasing or abusing or playing practical jokes or causing hurt to such students or asking a student to do any act or to perform something which such student will not in the ordinary course be willing to do.

All institutions will have to abide by the directives of the Honourable Supreme Court of India, Dated May 16, 2007 in SLP No. (S) 24295 of 2006 University of Kerala Vs Council, Principal's, Colleges, Kerala & Ors [with SLP (C) No.24296-99/2004 & W.P (CrI) No. 173/2006 & SLP (C) No.14356/2005] and the recommendations approved by the Honourable Supreme Court of India on effective prevention of ragging in educational institutions.

In case, the applicant for admission is found to have indulged in ragging in the past or if it is noticed later that he/she has indulged in ragging, admission may be refused or he/she shall be expelled from the educational institution. It shall be the collective responsibility of the authority of the institution to see to it that effective steps for preventing ragging are taken. Anti-ragging committees and anti-ragging squads will have to be formed to take effective measures against ragging and they should adhere to the stipulations and effectively monitor and comply with the directives.

Each of the student of the institution and his/her parents, or guardian are required to submit a combined undertaking at the time of registration/admission in prescribed format available in Annexure O which is mandatory for registration/admission.

#### **15. No Liquidated damages**

As per G.O.(Rt)No.77/2019/H.Edn dated 18.01.2019, the liquidated damages are fully exempted and stated that the clause of chapter 7.13 of AICTE approval process Hand Book 2019-2020 stated as follows:

- 15.1 In the event of a student withdrawing before the start of the course, the entire fee collected from the student, after a deduction of the processing fee of not more than Rs.1000/- (Rupees One thousand only) shall be refunded by the Institution. It would not be permissible for institutions to retain the school/institution leaving Certificates in original.
- 15.2 In case, if a student leaves after joining the course and if the vacated seat is consequently filled by another student by the last date of admission, the institution must refund the fee collected after a deduction of processing fee of not more than Rs. 1000/- (Rupees One thousand only) and proportionate deductions of monthly fees and hostel rent, where applicable.
- 15.3 In case the vacated seat is not filled, the Institution should refund the Security Deposit and return the original documents.

- 15.4 The Institution should not demand fee for the subsequent years from the students cancelling their admission at any point of time. Fee refund along with the return of certificates should be completed within 7 days.
- 15.5 Institutions not following guidelines issued by the Council regarding refund of fee for cancellation of admission or delaying refunds shall be liable to any one or more of the following punitive actions by the Council. Fine for non-compliance of refund rules of the fee levied against each case shall be
- Five times the total fee collected per student.
  - Suspension of approval for NRI and Supernumerary seats, if any, for one Academic Year.
  - Reduction in “Approved Intake”
  - No admission in one/more course(s) for one Academic Year
  - Withdrawal of approval for program(s)/courses(s)

#### **16. Other Items**

- a) Director of Technical Education or Director, LBS Centre for Science and Technology will not entertain any request for change of the date of Entrance Examination or Centralised Allotment Process.
- b) The Allotment for admission to B.Tech Lateral Entry course-2023-24 will be done by The Director, LBS Centre for Science and Technology under the supervision of DTE, Kerala.
- c) Candidate will not be permitted to take items such as Pencil, eraser, correction fluid, calculator, electronic gadgets, mobile phones etc, into the examination hall. Any attempt of malpractice in the Examination will result in the disqualification of the candidate and will lead to debarring of the candidate for not less than two years. Barcode tampering will also be treated as an act of Malpractice.
- d) All disputes pertaining to the Examination, selection or admission shall fall within the jurisdiction of the Hon'ble High Court of Kerala.
- e) Any other items not specifically covered in this prospectus will be decided by the Director of Technical Education, Kerala/Director, LBS Centre for Science and Technology and their decision shall be final and he is also empowered to cancel any admission found to be illegal subsequent to the admission.
- (f) Weeding out Rule: The records of the Entrance Examinations will be preserved upto 31st December of the year of conduct of Entrance Examination.

**Thiruvananthapuram**  
**Date:**

**Director of Technical Education**

**ANNEXURE A**

**FEEES FOR THE VARIOUS COURSES IN GOVERNMENT/ AIDED COLLEGES**

<b>Fee component</b>	<b>Amount</b>	<b>Remittance</b>
Admission Fee	Rs.240/-	At the time of admissiononly
Tuition Fee	Rs.3150/- per semester	Beginning of each semester
Special Fee (Revenue Rs.1740/- and P.D Rs.370/-)	Rs.2110/- per year	Beginning of odd semester
University Fee (Administration fee - Rs.1000/- at the time of admission. Sports and Athletic fee- Rs.500/-at the time of admission Exam fee - Rs. 500/- Subject fee - Rs.1200/-)	3200/-	Rs 1500/-at the time of admission and Rs.1700/- at the beginningof each semester.
Caution deposit	Rs.1000/-	At the time of admission only
Miscellaneous	Rs.25	At the time of admissiononly
<b>Total</b>	<b>Rs.9725 /-</b>	

## ANNEXURE B

### CRITERIA FOR RANK LIST PREPARATION

- 1) LET Admission will be based on a rank list prepared based on an entrance test
- 2) The Entrance Test have two parts ie, part A for Diploma students and D Voc stream candidates and Part B for B.Sc stream students.
- 3) **Part A of the Entrance Test for Diploma and D.Voc stream candidates is for 120 marks and will be on following** selected subjects of First year B.Tech course and English language.
  - i. Basic civil & Mechanical Engg - 30 marks (Annexure-J(i))
  - ii. Basic of Electrical and Electronics Engg - 30 marks (Annexure-J(ii))
  - iii. Programming in C - 15 marks (Annexure-J(iii))
  - iv. Engineering Mechanics -15 marks (Annexure-J(iv))
  - v. Mathematics -20 marks (Annexure-J(v))
  - vi. English -10 marks (Annexure-J(vi))**Part B of the Entrance Test for B.Sc stream candidates is for 120 marks and will be on following** selected subjects of first year B.Tech course and English language.
  - i. Mathematics -40 marks (Annexure-J(vii))
  - ii. Physics -30 marks (Annexure-J(viii))
  - iii. Chemistry -20 marks (Annexure-J(ix))
  - iv. Programming in C -15 marks (Annexure-J(x))
  - v. English -15 marks (Annexure-J(xi))
- 4) The detailed syllabus of the above selected subjects is shown in Annexure J
- 5) 1 mark for each correct answer. No negative marking.
- 6) Marking for more than one bubble against a question will be considered as wrong answer.
- 7) Erasing, overwriting, partial marking etc may also be treated as wrong answer.
- 8) No mark for unanswered questions.
- 9) If the candidate does not answer any single question, his candidature will be cancelled.

#### 10) Resolution of tie for preparing the rank list for the Diploma/D.Voc stream

- a) If there is any tie exists for same rank, candidates with higher score in Mathematics will be placed in higher rank.
- b) If tie still exists, candidates with higher score in English will be placed in higher rank.
- c) If the tie further exists, age of the candidate will be taken into account and the older will be placed in higher rank than the younger one.

#### 11) Resolution of tie for preparing the rank list for B.Sc stream

- a. If there is any tie exists for same rank, candidates with higher score in Mathematics will be placed in higher rank.
- b. If tie still exists, candidates with higher score in Physics will be placed in higher rank.
- c. If the tie further exists, age of the candidate will be taken into account and the older will be placed in higher rank than the younger one.

**ANNEXURE - C**  
**LIST OF SCHEDULED CASTES (SC)**

[As Amended by The Constitution (Scheduled Castes) Orders (Second Amendment) Act, 2002 (Act 61 of 2002) Vide Part VIII – Kerala - Schedule 1 Notified in the Gazette of India dated 18.12.2002, The Constitution (Scheduled Castes) Order (Amendment) Act 2007, The Constitution (Scheduled Castes) Order (Amendment) Act 2016, No. 24 of 2016]

- 1 Adi Andhra
- 2 Adi Dravida
- 3 Adi Karnataka
- 4 Ajila
- 5 Arunthathiyar
- 6 Ayyanavar
- 7 Baira
- 8 Bakuda
- 9 xxx
- 10 Bathada
- 11 xxx
- 12 Bharathar (Other than Parathar), Paravan
- 13 xxx
- 14 Chakkiliyan
- 15 Chamar, Muchi
- 16 Chandala
- 17 Cheruman
- 18 Domban
- 19 xxx
- 20 xxx
- 21 xxx
- 22 Gosangi
- 23 Hasla
- 24 Holeyá
- 25 Kadaiyan
- 26 Kakkalan, Kakkan
- 27 Kalladi
- 28 Kanakkan, Padanna, Padannan
- 29 xxx
- 30 Kavara (other than Telugu speaking or Tamil speaking Balija Kavarai, Gavara, Gavarai, Gavarai Naidu, Balija Naidu, Gajalu Balija or Valai Chetty)
- 31 Koosa
- 32 Kootan, Koodan
- 33 Kudumban
- 34 Kuravan, Sidhanar, Kuravar, Kurava, Sidhana
- 35 Maila
- 36 Malayan [In the areas comprising the Kannur, Kasaragode, Kozhikode and Wayanad Districts].
- 37 Mannan (മണ്ണൊറ), Pathiyan, Perumannan, Peruvannan, Vannan, Velan
- 38 xxx
- 39 Moger (other than Mogeýar)
- 40 Mundala
- 41 Nalakeýava

- 42 Nalkadaya
- 43 Nayadi
- 44 xxx
- 45 Pallan
- 46 Palluvan, Pulluvan
- 47 Pambada
- 48 Panan
- 49 xxx
- 50 Paraiyan, Parayan, Sambavar, Sambavan, Sambava, Paraya, Paraiya, Parayar
- 51 xxx
- 52 xxx
- 53 xxx
- 54 Pulayan, Cheramar, Pulaya, Pulayar, Cherama, Cheraman, Wayanad Pulayan, Wayanadan Pulayan, Matha, Matha Pulayan
- 55 xxx
- 56 Puthirai Vannan
- 57 Raneyar
- 58 Samagara
- 59 Samban
- 60 Semman, Chemman, Chemmar
- 61 Thandan (excluding Ezhuvas and Thiyyas who are known as Thandan, in the erstwhile Cochin and Malabar areas) and (Carpenters who are known as Thachan, in the erstwhile Cochin and Travancore State) Thachar (Other than carpenters)
- 62 Thoti
- 63 Vallon
- 64 Valluvan
- 65 xxx
- 66 xxx
- 67 Vetan
- 68 Vettuvan, Pulaya Vettuvan (in the areas of erstwhile Cochin State only).
- 69 Nerian



**ANNEXURE - D**  
**LIST OF SCHEDULED TRIBES (ST)**

[As Amended by The Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 2002 (Act 10 of 2003) Vide Part - VII - Kerala - Second Schedule Notified in the Gazette of India dated 8.1.2003, G.O. (Ms) No. 06/2014/SCSTDD dated 29.01.2014]

- |    |   |    |  |
|----|---|----|--|
| 1  | Adiyan  | 34 | Ulladan, [Ullatan]                             |
| 2  | Arandan [Arandan]   | 35 | Uraly  |
| 3  | Eravallan   | 36 | Mala Vettuvan(in Kasaragod & Kannur districts) |
| 4  | Hill Pulaya, Mala Pulayan, Kurumba Pulayan, Kuravazhi Pulayan, Pamba Pulayan  | 37 | Ten Kurumban, Jenu Kurumban                    |
| 5  | Irular, Irulan  | 38 | Thachanadan, Thachanadan Moopan                |
| 6  | Kadar [Wayanad Kadar]   | 39 | Cholanaickan                                   |
| 7  | xxx   | 40 | Mavilan  |
| 8  | Kanikkaran, Kanikkar  | 41 | Karimpalan                                     |
| 9  | Kattunayakan  | 42 | Vetta Kuruman                                  |
| 10 | [Kochuvelan]  | 43 | Mala Panikkar                                  |
| 11 | xxx   | 44 | Maratis of Kasargod and Hosdurg Taluk          |
| 12 | xxx   |    |  |
| 13 | Koraga  |    |  |
| 14 | xxx   |    |  |
| 15 | Kudiya, Melakudi  |    |  |
| 16 | Kurichchan [Kurichiy]   |    |  |
| 17 | Kurumans, Mulla Kuruman, Mulla Kuruman, Mala Kuruman  |    |  |
| 18 | Kurumbas, [Kurumbar, Kurumban]  |    |  |
| 19 | Maha Malasar  |    |  |
| 20 | Malai Arayan [Mala Arayan]  |    |  |
| 21 | Malai Pandaram  |    |  |
| 22 | Malai Vedan [Malavedan]   |    |  |
| 23 | Malakkuravan  |    |  |
| 24 | Malasar   |    |  |
| 25 | [Malayan, Nattu Malayan, Konga Malayan (excluding the areas comprising the Kasaragod, Kannur, Wayanad and Kozhikode Districts)] |    |  |
| 26 | Malayarayar   |    |  |
| 27 | Mannan (മന്നന്മാർ)  |    |  |
| 28 | xxx   |    |  |
| 29 | Muthuvan, Mudugar, Muduvan  |    |  |
| 30 | Palleyan, Palliyan, Palliyar, Paliyan   |    |  |
| 31 | xxx   |    |  |
| 32 | xxx   |    |  |
| 33 | Paniyan   |    |  |

**ANNEXURE - E**

**LIST OF OTHER ELIGIBLE COMMUNITIES (OEC)**

[GO (Ms) No.14/2017/BCDD dated: 02.08.2017, GO (Ms) No.7/2013/BCDD dated: 19.07.2013 and GO(Ms)No.9/2021/BCDD dated18.09.2021]

**OEC (ST)**

- 1 Allar (Alan)
- 2 Chingathan
- 3 Irivavan
- 4 Kalanadi
- 5 Malayan, Konga-Malayan(Kasargod, Kannur, Wayanad and Kozhikode Districts)
- 6 Kundu-Vadiyan
- 7 Kunnuvarmannadi
- 8 Malamuthan
- 9 Malavettuvar (Except Kasargod and Kannur Districts)
- 10 Malayalar
- 11 Panimalayan
- 12 Pathiyan (other than Dhobies)
- 13 Hindu-Malayali

**OEC (SC)**

- 1 Chakkamar
- 2 Madiga
- 3 **xxx**
- 4 Kudumbi
- 5 Dheevara/Dheevaran (Arayan, Valan, Nulayan, Mukkuvan, Arayavathi, Valanchiyar, Paniyakal, Mokaya, Bovi, Mogayar, Mogaveerar)
- 6 Scheduled Caste converted to Christianity
- 7 Kusavan, Kulalan, Kumbharan, Velaan, Velaar, Odan, Andhra Nair, Andhuru Nair,
- 8 Pulaya Vettuvan (Except Kochi State)

**ANNEXURE – F**  
**LIST OF COMMUNITIES ELIGIBLE FOR EDUCATIONAL CONCESSIONS AS IS GIVEN TO OEC**  
[G.O.(Ms) No. 10/2014/BCDD dated: 23.05.2014]]

- 1 Vaniya (Vanika, Vanika Vaisya, Vanibha Chetty, Vaniya Chetty, Ayiravar, Nagarathar and Vaniyan
- 2 Veluthedathu Nair (Veluthedan and Vannathan)
- 3 Chetty/Chetties (Kottar Chetties, Parakka Chetties, Elur Chetties, Attingal Chetties, Pudukkada Chetties, Iraniel Chetties, Sri Pandara Cetties, Telugu Chetties, Udiyankulangara Chetties, Peroorkada Chetties, Sadhu Chetties, 24 Mana Chetties, Wayanadan Chetties, Kalavara Chetties and 24 Mana Telugu Chetties
- 4 Ezhavathi (Vathy)
- 5 Ganika
- 6 Kanisu or Kaniyar Panicker, Kani or Kaniyan (Ganaka) or Kanisan or Kamnan, Kalari Kurup/Kalari Panicker
- 7 Vilkurup, Perumkollan
- 8 Yadavas (Kolaya, Ayar, Mayar, Maniyani and Iruman), Erumakkar
- 9 Devanga
- 10 Pattariyas
- 11 Saliyas (Chaliya, Chaliyan)
- 12 Pandithar
- 13 Vaniar
- 14 Ezhuthachan
- 15 Chakkala/Chakkala Nair
- 16 Reddiars (throughout the State except in Malabar Area)
- 17 Kavuthiya
- 18 Veerasaiva (Yogi, Yogeewara, Poopandram, Malapandaram, Jangam, Matapathi, Pandaram, Pandaran, Vairavi, Vairagi)
- 19 Vilakkithala Nair – Vilakkithalavan
- 20 Vaduka – Vadukan, Vadugar, Vaduka, Vaduvan
- 21 Chavalakkaran
- 22 Agasa
- 23 Kaikolan
- 24 Kannadiyans
- 25 Kerala Mudalis
- 26 Madivala
- 27 Naikkans
- 28 Tholkolans
- 29 Thottian
- 30 Mooppar or Kallan Moopan or Kallan Moopar

## ANNEXURE - G

### LIST OF SOCIALLY AND EDUCATIONALLY BACKWARD CLASSES (SEBC)

[Vide G.O. (P) 208/66/Edn. dated 02.05.1966, G.O. (Ms) No. 95/08/SCSTDD dated 06.10.2008 & G.O. (Ms) No. 58/2012/SCSTDD dated 16.04.2012, G.O.(Ms) No. 10/2014/BCDD dated: 23.05.2014, Lr No. 1538/A2/2014/BCDD dated 02.07.2014, G.O.(Ms) No. 03/2018/BCDD dated 09.04.2018, GO(Ms)No.05/2020/BCDD dated 16.03.2020, GO(Ms)No.08/2021/BCDD dated 21.06.2021]

- |   |   |
|---|---|
| <b>I. Ezhavas</b> including Ezhavas, Thiyyas, Ishuvan, Izhuvan, Illuvan and Billava   | 10. Chakkala (Chakkala Nair)  |
| <b>II. Muslims</b> (all sections following Islam)   | 11. Devadiga  |
| <b>III. Latin Catholics and Anglo Indians</b>   | 12. Ezhavathi (Vathi)   |
| <b>IV. Dheevera</b> including Dheeveran, Araya, Arayas, Arayan, Valan, Nulayan, Mukkuvan, Arayavathi, Valinjiar, Paniakkal, Paniakel, Mukaya, Bovis-Mukayar, Mukaveeran, Mogaveera, Mogavirar, Mogayan  | 13. Ezhuthachan, Kadupattan   |
| <b>V. Viswakarmas</b> including Viswakarma, Asari, Chaptegra, Kallassari, Kalthachan, Kammala, Kamsala, Kannan, Karuvan, Kitaran, Kollan, Malayala Kammala, Moosari, Pandikammala, Pandithattan, Perumkollan, Thachan, Thattan, Vilkurup, Villasan, Viswabrahmanan or Viswabrahmanar, Viswakarmala and Palisa Perumkollan | 14. Gudigara  |
| <b>VI. Kusavan</b> including Kulalan, Kulala Nair, Kumbaran, Velaan, Velaans, Velaar, Odan, Kulala, Andhra Nair, Anthuru Nair   | 15. Galada Konkani  |
| <b>VII. Other Backward Christians</b>   | 16. Ganjam Reddies  |
| (a) SIUC  | 17. Gatti   |
| (b) Converts from Scheduled Castes to Christianity  | 18. Gowda   |
| (c) Nadar belonging to Christian religious denominations other than SIUC  | 19. Ganika including Nagavamsom   |
| <b>VIII. Kudumbi</b>  | 20. Hegde   |
| <b>IX. Other Backward Hindus, i.e.</b>  | 21. Hindu Nadar   |
| 1. Agasa  | 22. Idiga including Settibalija   |
| 2. Kharvi   | 23. Jangam  |
| 3. Aremahrati   | 24. Jogi  |
| 4. Arya, Atagara, Devanga, Kaikolan, (Sengunthar) Pattarya, Pattariyas, Saliyas (Padmasali, Pattusali, Thogatta, Karanibhakatula, Senapathula, Sali, Sale, Karikalabhakulu, Chaliya, Chaliyan) Sourashtra, Khatri, Patnukaran, Illathu Pillai, Illa Vellalar, Illathar  | 25. Jhetty  |
| 5. Bestha   | 26. Kanisu or Kaniyar-Panicker, Kaniyan, Kanisan or Kamnan, Kannian or Kani, Ganaka |
| 6. Bhandari or Bhondari   | 27. xxx   |
| 7. Boya   | 28. Kalarikurup or Kalari Panicker  |
| 8. Boyan  | 29. Kerala Muthali, Kerala Mudalis  |
| 9. Chavalakkaran  | 30. Oudan (Donga) Odda (Vodde or Vadde or Veddai)                                   |
|   | 31. Kalavanthula  |
|   | 32. Kallan including Isanattu Kallar  |
|   | 33. Kabera  |
|   | 34. Korachas  |
|   | 35. x x x   |
|   | 36. Kannadiyans   |
|   | 37. Kavuthiyan, Kavuthiya   |
|   | 38. Kavudiyaru  |
|   | 39. Kelasi or Kalasi Panicker   |
|   | 40. Koppala Velamas   |
|   | 41. Krishnanvaka  |
|   | 42. Kuruba  |

43. Kurumba
44. Maravan (Maravar)
45. Madivala
46. Maruthuvar
47. Mahratta (Non-Brahman)
48. Melakudi (Kudiyar)
49. x x x
50. Moili
51. Mukhari
52. Modibanda
53. Moovari
54. Moniagar
55. Naicken including Tholuva Naicker and Vettillakkara Naicker, Naikkans
56. Padyachi (Villayankuppam)
57. Palli
58. Panniyar or Pannayar
59. Parkavakulam (Surithiman, Malayaman, Nathaman, Moopnar and Nainar)
60. Rajapuri
61. Sakravar (Kavathi)
62. Senaithalaivar, Elavania, Senaikudayam
63. Chetty/Chetties including Kottar Chetties, Parakka Chetties, Elur Chetties, Attingal Chetties, Pudukkada Chetties, Iraniel Chetties, Sri Pandara Chetties, Telugu Chetties, Udiyankulangara Chetties, Peroorkada Chetties, Sadhu Chetties, 24 Mana Chetties, Wayanadan Chetties, Kalavara Chetties and 24 Mana Telugu Chetties
64. Tholkolan
65. Thottiyar, Thottian
66. Uppara (Sagara)
67. Ural Goundan
68. Valaiyan
69. Vada Balija
70. Vakkaliga
71. Vaduvan(Vadugan), Vaduka, Vadukan, Vadugar
72. Veera Saivas (Pandaram, Vairavi, Vairagi, Yogeewar, Yogeewara, Poopandaram, Malapandaram, Pandaran, Matapathi and Yogi)
73. Veluthedathu Nair including Vannathan, Veluthedan and Rajaka
74. Vilakkithala Nair including Vilakkathalavan, Ambattan Pranopakari, Pandithar and Nusuvan
75. Vaniya including Vanika, Vanika Vaisya, Vaisya Chetty, Vanibha Chetty, Ayiravar Nagarathar, Vaniyan, Vaniya Chetty, Vaniar
76. Yadava including Kolaya, Ayar, Mayar, Maniyani, Eruman, Iruman, Erumakkar, Golla and Kolaries
77. Chakkamar
78. Mogers of Kasaragod Taluk
79. x x x
80. x x x
81. x x x
82. Reddiars (throughout the State except in Malabar area)
83. Mooppar or Kallan Moopnar or Kallan Moopar

**ANNEXURE - H**

**CERTIFICATE FOR CLAIM OF SPECIAL RESERVATION UNDER QUOTA FOR CHILDREN OF  
SERVICING DEFENCE PERSONNEL (SD)/ PARA MILITARY FORCE PERSONNEL (RP)**

Certified that Master/Kum....., an applicant for admission to  
the Lateral Entry B.Tech, Kerala, 2022, is the son/daughter\* of  
Shri/Smt.....  
.....(official address) who is serving defense/ paramilitary force\*  
personnel presently working at .....

**Place:**

**Signature of Commanding officer:**

**Date:**

**Name:**

**(Office seal)**

**ANNEXURE I**

**CERTIFICATE FOR CLAIM OF SPECIAL RESERVATION UNDER QUOTA FOR CHILDREN  
OF EX-SERVICEMEN (XS)**

Certified that Master/Kum .....,

an applicant for admission to the Lateral Entry B.Tech, Kerala 2022 is the son/ daughter\* of  
Shri/Smt.....

.....(Official address) who is an ex-serviceman, and that no  
else in the family of the applicant has earlier enjoyed the special reservation benefit applicable to them, for  
admission to B.Tech (LET) in Kerala.

Place:

Signature of Military Authority/State/  
Zilla Sainik Welfare Officer:

Date:

Name:

**(Office seal)**

# ANNEXURE J

## SYLLABUS FOR DIPLOMA AND D. VOC STUDENTS

### Annexure-J (i)

#### BASICS OF CIVIL & MECHANICAL ENGINEERING (30 marks)

##### Module 1

**General Introduction to Civil Engineering:** Relevance of Civil Engineering in the overall infrastructural development of the country. Responsibility of an engineer in ensuring the safety of built environment. Brief introduction to major disciplines of Civil Engineering like Transportation Engineering, Structural Engineering, Geo-technical Engineering, Water Resources Engineering and Environmental Engineering.

**Introduction to buildings:** Types of buildings, selection of site for buildings, components of a residential building and their functions.

**Building rules and regulations:** Relevance of NBC, KBR & CRZ norms (brief discussion only).

**Building area:** Plinth area, built up area, floor area, carpet area and floor area ratio for a building as per KBR.

##### Module 2

**Surveying:** Importance, objectives and principles.

**Construction materials, Conventional construction materials:** types, properties and uses of building materials: bricks, stones, cement, sand and timber

**Cement concrete:** Constituent materials, properties and types.

**Steel:** Steel sections and steel reinforcements, types and uses.

**Modern construction materials:-** Architectural glass, ceramics, Plastics, composite materials, thermal and acoustic insulating materials, decorative panels, waterproofing materials. Modern uses of gypsum, pre fabricated building components(brief discussion only).

##### Module 3

**Building Construction:** Foundations: Bearing capacity of soil (definition only), functions of foundations, types – shallow and deep (brief discussion only). Load bearing and framed structures (concept only).

**Brick masonry:** - Header and stretcher bond, English bond & Flemish bond random rubble masonry.

**Roofs and floors:** - Functions, types; flooring materials (brief discussion only).

**Basic infrastructure services:** MEP, HVAC, elevators, escalators and ramps (Civil Engineering aspects only), fire safety for buildings.

**Green buildings:-** Materials, energy systems, water management and environment for green buildings. (brief discussion only).

##### Module 4

**Analysis of thermodynamic cycles:** Carnot, Otto, Diesel cycles, Derivation of efficiency of these cycles, Problems to calculate heat added, heat rejected, net work and efficiency. IC Engines: CI, SI, 2-Stroke, 4-Stroke engines. Listing the parts of different types of IC Engines. Efficiencies of IC Engines(Definitions only), Air, Fuel, cooling and lubricating systems in SI and CI Engines, CRDI, MPFI. Concept of hybrid engines.

##### Module 5

**Refrigeration:** Unit of refrigeration, reversed Carnot cycle, COP, vapour compression cycle (only description and no problems); Definitions of dry, wet & dew point temperatures, specific humidity and relative humidity, Cooling and dehumidification, Layout of unit and central air conditioners.

**Description about working with sketches of:** Reciprocating pump, Centrifugal pump, Pelton turbine, Francis turbine and Kaplan turbine. Overall efficiency, Problems on calculation of input and output power of pumps and turbines (No velocity triangles)

**Description about working with sketches of:** Belt and Chain drives, Gear and Gear trains, Single plate clutches.

##### Module 6

**Manufacturing Process:** Basic description of the manufacturing processes – Sand Casting, Forging, Rolling, Extrusion and their applications.

**Metal Joining Processes:** List types of welding, Description with sketches of Arc Welding, Soldering and Brazing and their applications

**Basic Machining operations:** Turning, Drilling, Milling and Grinding.

**Description about working with block diagram of:** Lathe, Drilling machine, Milling machine, CNC Machine. Principle of CAD/CAM, Rapid and Additive manufacturing.



## Annexure-J(ii)

### BASICS OF ELECTRICAL AND ELECTRONICS ENGINEERING (30marks)

#### Module 1

##### Elementary Concepts of Electric Circuits

**Elementary concepts of DC electric circuits:** Basic Terminology including voltage, current, power, resistance, emf; Resistances in series and parallel; Current and Voltage Division Rules; Capacitors & Inductors: V-I relations and energy stored. Ohms Law and Kirchhoff's laws-Problems; Star-delta conversion (resistive networks only-derivation not required)-problems.

**Analysis of DC electric circuits:** Mesh current method - Matrix representation - Solution of network equations. Node voltage methods-matrix representation-solution of network equations by matrix methods. Numerical problems.

#### Module 2

##### Elementary Concepts of Magnetic circuits, Electromagnetic Induction and AC fundamentals

**Magnetic Circuits:** Basic Terminology: MMF, field strength, flux density, reluctance - comparison between electric and magnetic circuits- Series and parallel magnetic circuits with composite materials, numerical problems.

**Electromagnetic Induction:** Faraday's laws, problems, Lenz's law- statically induced and dynamically induced emfs - Self- inductance and mutual inductance, coefficient of coupling

**Alternating Current fundamentals:** Generation of alternating voltages-Representation of sinusoidal waveforms: frequency, period, Average, RMS values and form factor of waveforms-Numerical Problems.

#### Module 3

**AC Circuits:** Phasor representation of sinusoidal quantities. Trigonometric, Rectangular, Polar and complex forms.

**Analysis of simple AC circuits:** Purely resistive, inductive & capacitive circuits; Inductive and capacitive reactance, concept of impedance. Average Power Power factor. Analysis of RL, RC and RLC series circuits-active, reactive and apparent power. Simple numerical problems.

**Three phase AC systems:** Generation of three phase voltages; advantages of three phase systems, star and delta connections (balanced only), relation between line and phase voltages, line and phase currents- Numerical problems

#### Module 4

**Introduction to Semiconductor devices:** Evolution of electronics – Vacuum tubes to nano electronics. **Resistors, Capacitors and Inductors (constructional features not required):** types, specifications. Standard values, color coding. **PN Junction diode:** Principle of operation, V-I characteristics, principle of avalanche breakdown. **Bipolar Junction Transistors:** PNP and NPN structures, Principle of operation, relation between current gains in CE, CB and CC, input and output characteristics of common emitter configuration.

#### Module 5

**Basic electronic circuits and instrumentation:** Rectifiers and power supplies: Block diagram description of a dc power supply, Working of a full wave bridge rectifier, capacitor filter (no analysis), working of simple zener voltage regulator. **Amplifiers:** Block diagram of Public Address system, Circuit diagram and working of common emitter (RC coupled) amplifier with its frequency response, Concept of voltage divider biasing. **Electronic Instrumentation:** Block diagram of an electronic instrumentation system.

#### Module 6

**Introduction to Communication Systems:** Evolution of communication systems – Telegraphy to 5G.

**Radio communication:** principle of AM & FM, frequency bands used for various communication systems, block diagram of super heterodyne receiver, Principle of antenna – radiation from accelerated charge. **Mobile communication:** basic principles of cellular communications, principle and block diagram of GSM.

## **Annexure-J(iii)**

### **PROGRAMING IN C (15 marks)**

#### **Module 1**

##### **Basics of Computer Hardware and Software**

**Basics of Computer Architecture:** processor, Memory, Input & Output devices

**Application Software & System software:** Compilers, interpreters, High level and low level languages Introduction to structured approach to programming, Flow chart Algorithms, Pseudo code (bubble sort, linear search - algorithms and pseudocode)

#### **Module 2 Program Basics**

**Basic structure of C program:** Character set, Tokens, Identifiers in C, Variables and Data Types, Constants, Console IO Operations, printf and scanf

**Operators and Expressions:** Expressions and Arithmetic Operators, Relational and Logical Operators, Conditional operator, size of operator, Assignment operators and Bitwise Operators. Operators Precedence

**Control Flow Statements:** If Statement, Switch Statement, Unconditional Branching using goto statement, While Loop, Do While Loop, For Loop, Break and Continue statements. (Simple programs covering control flow)

#### **Module 3**

##### **Arrays and strings**

**Arrays Declaration and Initialization, 1-Dimensional Array, 2-Dimensional Array**

**String processing:** In built String handling functions (strlen, strcpy, strcat and strcmp, puts, gets) Linear search program, bubble sort program, simple programs covering arrays and strings

#### **Module 4**

##### **Working with functions**

Introduction to modular programming, writing functions, formal parameters, actual parameters Pass by Value, Recursion, Arrays as Function Parameters structure, union, Storage Classes, Scope and life time of variables, simple programs using functions

#### **Module 5 Pointers and Files**

**Basics of Pointer:** declaring pointers, accessing data through pointers, NULL pointer, array access using pointers, pass by reference effect

**File Operations:** open, close, read, write, append .

**Sequential access and random access to files:** In built file handling functions (rewind(), fseek(), ftell(), feof(), fread(), fwrite()), simple programs covering pointers and files.

**Annexure-J (iv)**  
**ENGINEERING MECHANICS (15 marks)**

**Module 1**

**Introduction to Engineering Mechanics**-statics-basic principles of statics-Parallelogram law, equilibrium law, principles of superposition and transmissibility, law of action and reaction(review) free body diagrams. Concurrent coplanar forces- composition and resolution of forces-resultant and equilibrium equations – methods of projections – methods of moments – Varignon’s Theorem of moments.

**Module 2**

**Friction** – sliding friction - Coulomb’s laws of friction – analysis of single bodies –wedges, ladder- analysis of connected bodies .

**Parallel coplanar forces** – couple - resultant of parallel forces – centre of parallel forces – equilibrium of parallel forces – Simple beam subject to concentrated vertical loads. General coplanar force system - resultant and equilibrium equations.

**Module 3**

**Centroid of composite areas**- – moment of inertia-parallel axis and perpendicular axis theorems. Polar moment of inertia, radius of gyration, mass moment of inertia-ring, cylinder and disc. Theorem of Pappus Guldinus (demonstration only)

**Forces in space** - vectorial representation of forces, moments and couples –resultant and equilibrium equations – concurrent forces in space (simple problems only)

**Module 4**

**Dynamics – rectilinear translation - equations of kinematics(review)**

kinetics – equation of motion – D’Alembert’s principle. – motion on horizontal and inclined surfaces, motion of connected bodies. Impulse momentum equation and work energy equation (concepts only).

**Curvilinear translation** - equations of kinematics –projectile motion(review), kinetics – equation of motion.

**Moment of momentum and work energy equation** (concepts only).

**Module 5**

**Rotation** – kinematics of rotation- equation of motion for a rigid body rotating about a fixed axis – rotation under a constant moment.

**Plane motion of rigid body** – instantaneous centre of rotation (concept only).

**Simple harmonic motion** – free vibration –degree of freedom- undamped free vibration of spring mass system-effect of damping(concept only)

**Annexure-J(v)**  
**MATHEMATICS (20 marks)**

**Module 1**

**Linear algebra**

Systems of linear equations, Solution by Gauss elimination, row echelon form and rank of a matrix, fundamental theorem for linear systems (homogeneous and non-homogeneous, without proof), Eigen values and eigen vectors. Diagonalization of matrices, orthogonal transformation, quadratic forms and their canonical forms.

**Module 2**

**Multivariable calculus-Differentiation and Integration**

Concept of limit and continuity of functions of two variables, partial derivatives, chain rule, total derivative, Relative maxima and minima, Absolute maxima and minima on closed and bounded set. Double integrals (Cartesian), reversing the order of integration, Change of coordinates (Cartesian to polar).

**Module 3**

**Sequences and series**

Convergence of sequences and series, convergence of geometric series and p-series (without proof), test of convergence (comparison, ratio and root tests without proof). Taylor series (without proof, assuming the possibility of power series expansion in appropriate domains), Binomial series and series representation of exponential, trigonometric, logarithmic functions (without proofs of convergence); Fourier series, Euler formulas, Convergence of Fourier series (without proof).

**Module 4**

**Calculus of vector functions**

Vector valued function of single variable, derivative of vector function and geometrical interpretation, motion along a curve- velocity, speed and acceleration. Concept of scalar and vector fields, Gradient and its properties, directional derivative, divergence and curl.

**Module- 5**

**Ordinary differential equations, Laplace Transforms and Fourier Transforms**

Homogenous linear differential equation of second order, superposition principle, general solution, homogenous linear ODEs with constant coefficients-general solution. Solution of Euler-Cauchy equations (second order only). Existence and uniqueness (without proof).

Laplace Transform and its inverse, linearity, Laplace transform of basic functions, Laplace transform of derivatives and integrals, solution of differential equations using Laplace transform, Unit step function.

Fourier integral representation, Fourier sine and cosine integrals. Fourier sine and cosine transforms, inverse sine and cosine transform.

Fourier transform and inverse Fourier transform, basic properties.

**Annexure-J(vi)**

**ENGLISH (10 marks)**

For English, out of 10 marks to be awarded, 5 marks will be for questions based on a given passage and remaining 5 marks for basic Grammar and General English of plus 2 standards.

# SYLLABUS FOR B.SC STUDENTS

## Annexure-J(vii)

### MATHEMATICS(40 marks)

#### Module 1 Linear algebra

Systems of linear equations, Solution by Gauss elimination, row echelon form and rank of a matrix, fundamental theorem for linear systems (homogeneous and non-homogeneous, without proof), Eigen values and eigen vectors. Diagonalization of matrices, orthogonal transformation, quadratic forms and their canonical forms.

#### Module 2

##### Multivariable calculus-Differentiation and Integration

Concept of limit and continuity of functions of two variables, partial derivatives, chain rule, total derivative, Relative maxima and minima, Absolute maxima and minima on closed and bounded set. Double integrals (Cartesian), reversing the order of integration, Change of coordinates (Cartesian to polar).

#### Module 3

##### Sequences and series

Convergence of sequences and series, convergence of geometric series and p-series(without proof), test of convergence (comparison, ratio and root tests without proof). Taylor series (without proof, assuming the possibility of power series expansion in appropriate domains), Binomial series and series representation of exponential, trigonometric, logarithmic functions (without proofs of convergence); Fourier series, Euler formulas, Convergence of Fourier series (without proof).

#### Module 4

##### Calculus of vector functions

Vector valued function of single variable, derivative of vector function and geometrical interpretation, motion along a curve- velocity, speed and acceleration. Concept of scalar and vector fields, Gradient and its properties, directional derivative, divergence and curl.

#### Module- 5

##### Ordinary differential equations, Laplace Transforms and Fourier Transforms

Homogeneous linear differential equation of second order, superposition principle, general solution, homogeneous linear ODEs with constant coefficients-general solution. Solution of Euler-Cauchy equations (second order only). Existence and uniqueness (without proof). Laplace Transform and its inverse, linearity, Laplace transform of basic functions, Laplace transform of derivatives and integrals, solution of differential equations using Laplace transform, Unit step function. Fourier integral representation, Fourier sine and cosine integrals. Fourier sine and cosine transforms, inverse sine and cosine transform. Fourier transform and inverse Fourier transform, basic properties.

**Annexure-J(viii)**  
**ENGINEERING PHYSICS (30 marks)**

**Module 1**

**Engineering Mechanics and Friction**

**Introduction to Engineering Mechanics**-statics-basic principles of statics-Parallelogram law, equilibrium law, principles of superposition and transmissibility, law of action and reaction(review) free body diagrams.

Concurrent coplanar forces-composition and resolution of forces-resultant and equilibrium equations –methods of projections

– methods of moments .

**Friction – sliding friction** - Coulomb’s laws of friction – analysis of single bodies –wedges, ladder- analysis of connected bodies .

**Module 2**

**Dynamics** – rectilinear translation - equations of kinematics (review) kinetics – equation of motion – D’Alembert’s principle.

– motion on horizontal and inclined surfaces, motion of connected bodies. Impulse momentum equation and work energy equation (concepts only).

*Rotation* – kinematics of rotation- equation of motion for a rigid body rotating about a fixed axis – rotation under a constant moment. Plane motion of rigid body – instantaneous centre of rotation (concept only).

Simple harmonic motion – free vibration –degree of freedom- undamped free vibration of spring mass system-effect of damping(concept only)

**Module3**

**Oscillations, Waves and Wave Optics**

Harmonic oscillations, Damped harmonic motion- Over damped, Critically damped and Under damped Cases, Quality factor-Expression, Forced oscillations, Amplitude Resonance-Expression for Resonant frequency, Quality factor and Sharpness of Resonance, Wave motion- Derivation of one dimensional wave equation and its solution.

Interference of light-Principle of superposition of waves, Theory of thin films - Cosine law (Reflected system), Derivation of the conditions of constructive and destructive Interference, - Measurement of wavelength and refractive index, Diffraction of light, Fresnel and Fraunhofer classes of diffraction.

**Module 4**

**Quantum Mechanics & Nanotechnology**

Introduction for the need of Quantum mechanics, Wave nature of Particles, Uncertainty principle,Applications- Absence of electrons inside a nucleus and Natural line broadening Mechanism. Introduction to nanoscience and technology, Increase in surface to volume ratio for nanomaterials, Quantum confinement in one dimension, Properties of nanomaterials-mechanical, electrical and optical, Applications of nanotechnology (qualitative ideas)

**Acoustics & Ultrasonics**

Acoustics, Classification of sound-Musical sound-Noise, Characteristics of Musical Sounds-Pitch or frequency- Loudness or Intensity-Measurement of Intensity level-Decibel-Quality or timbre, Absorption coefficient, Reverberation-Reverberation time-Significance- Factors affecting architectural acoustics and their remedies, Magnetostriction effect and Piezoelectric effect, Magnetostriction oscillator and piezoelectric oscillator – Working, Detection of ultrasonic waves.

**Module 5**

**Laser and Fibre optics**

Properties of laser, Absorption and emission of radiation, Spontaneous and stimulated emission, Construction and working of Ruby laser and Helium neon laser .Applications of laser, Holography, Difference between hologram and photograph, Applications Optic fibre-Principle of propagation of light, Types of fibres-Step index and Graded index fibres, Numerical aperture.

## Annexure-J(ix)

### ENGINEERING CHEMISTRY (20 marks)

#### Module 1

##### Electrochemistry and Corrosion

Introduction - Differences between electrolytic and electrochemical cells - Daniel cell - redox reactions - cell representation. Different types of electrodes (brief) - Reference electrodes - SHE - Calomel electrode - Glass Electrode - Construction and Working. Single electrode potential - definition - Helmholtz electrical double layer - Determination of  $E^0$  using calomel electrode. Determination of pH using glass electrode. Electrochemical series and its applications. Free energy and EMF - Nernst Equation - Derivation - single electrode and cell (Numericals) - Application - Variation of emf with temperature. Potentiometric titration - Introduction -Redox titration only. Lithiumion cell - construction and working. Conductivity- Measurement of conductivity of a solution (Numericals). **Corrosion**-Electrochemical corrosion – mechanism. Galvanic series- cathodic protection - electroless plating – Copper and Nickel plating.

#### Module 2

##### Spectroscopic Techniques and Applications

Introduction- Types of spectrum - electromagnetic spectrum - molecular energy levels - Beer Lambert's law (Numericals). UV-Visible Spectroscopy – Principle - Types of electronic transitions - Energy level diagram of ethane, butadiene, benzene and hexatriene. Instrumentation of UV-Visible spectrometer and applications. IR-Spectroscopy – Principle - Number of vibrational modes - Vibrational energy states of a diatomic molecule and - Determination of force constant of diatomic molecule (Numericals) –Applications.  $^1\text{H}$  NMR spectroscopy – Principle - Relation between field strength and frequency - chemical shift - spin-spin splitting (spectral problems ) - coupling constant (definition) - applications of NMR- including MRI (brief).

#### Module 3

##### Instrumental Methods and Nanomaterials

Thermal analysis –TGA- Principle, instrumentation (block diagram) and applications – TGA of  $\text{CaC}_2\text{O}_4 \cdot \text{H}_2\text{O}$  and polymers. DTA-Principle, instrumentation (block diagram) and applications - DTA of  $\text{CaC}_2\text{O}_4 \cdot \text{H}_2\text{O}$ . Chromatographic methods - Basic principles and applications of column and TLC Retention factor. GC and HPLC- Principle, instrumentation (block diagram) - retention time and applications.

**Nanomaterials** - Definition - Classification - Chemical methods of preparation - Hydrolysis and Reduction - Applications of nanomaterials - Surface characterisation -SEM – Principle and instrumentation (block diagram).

#### Module 4

##### Stereochemistry and Polymer Chemistry

Isomerism-Structural, chain, position, functional, tautomerism and matamerism - Definition with examples - Representation of 3D structures-Newman, Sawhorse, Wedge and Fischer projection of substituted methane and ethane. Stereoisomerism - Geometrical isomerism in double bonds and cycloalkanes (cis-trans and E-Z notations). R-S Notation – Rules and examples -Optical isomerism, Chirality, Enantiomers and Diastereoisomers-Definition with examples. Conformational analysis of ethane, butane, cyclohexane, mono and di methyl substituted cyclohexane.

Copolymers - Definition - Types - Random, Alternating, Block and Graft copolymers - ABS - preparation, properties and applications. Kevlar-preparation, properties and applications. Conducting polymers - Doping - Polyaniline and Polypyrrole - preparation properties and applications. OLED - Principle, construction and advantages.

#### Module 5

##### Water Chemistry and Sewage Water Treatment

Water characteristics - Hardness - Types of hardness- Temporary and Permanent - Disadvantages of hard water - Units of hardness- ppm and mg/L -Degree of hardness (Numericals) - Estimation of hardness-EDTA method (Numericals). Water softening methods-Ion exchange process-Principle, procedure and advantages. Reverse osmosis – principle, process and advantages. Municipal water treatment (brief) - Disinfection methods - chlorination, ozone and UV irradiation.

Dissolved oxygen (DO) -Estimation (only brief procedure-Winkler's method), BOD and COD definition, estimation (only brief procedure) and significance (Numericals). Sewage water treatment - Primary, Secondary and Tertiary - Flow diagram - Trickling filter and UASB process

**Annexure-J(x)**  
**PROGRAMING IN C ( 15 marks)**

**Module 1**

**Basics of Computer Hardware and Software**

**Basics of Computer Architecture:** processor, Memory, Input& Output devices

**Application Software & System software:** Compilers, interpreters, High level and low level languages  
Introduction to structured approach to programming, Flow chart Algorithms, Pseudo code (bubble sort, linear search - algorithms and pseudocode)

**Module 2 Program Basics**

**Basic structure of C program:** Character set, Tokens, Identifiers in C, Variables and Data Types , Constants, Console IO Operations, printf and scanf

**Operators and Expressions:** Expressions and Arithmetic Operators, Relational and Logical Operators, Conditional operator, size of operator, Assignment operators and Bitwise Operators. Operators Precedence

**Control Flow Statements:** If Statement, Switch Statement, Unconditional Branching using goto statement, While Loop, Do While Loop, For Loop, Break and Continue statements.(Simple programs covering control flow)

**Module 3**

**Arrays and strings**

**Arrays Declaration and Initialization, 1-Dimensional Array, 2-Dimensional Array**

**String processing:** In built String handling functions (strlen, strcpy, strcat and strcmp, puts, gets) Linear search program, bubble sort program, simple programs covering arrays and strings

**Module 4**

**Working with functions**

Introduction to modular programming, writing functions, formal parameters, actual parameters Pass by Value, Recursion, Arrays as Function Parameters structure, union, Storage Classes, Scope and life time of variables, simple programs using functions

**Module 5 Pointers and Files**

**Basics of Pointer:** declaring pointers, accessing data though pointers, NULL pointer, array access using pointers, pass by reference effect

**File Operations:** open, close, read, write, append.

**Sequential access and random access to files:** In built file handling functions (rewind(), fseek(), ftell(), feof(), fread(), fwrite()), simple programs covering pointers and files.



## **Annexure-J(xi)**

### **ENGLISH (15 marks)**

#### **Total 15 questions for 15 marks based on the following topics**

Vocabulary Building , The concept of Word Formation, Root words from foreign languages and their use in English, Acquaintance with prefixes and suffixes from foreign languages in English to form derivatives. Synonyms, antonyms, and standard abbreviations. Basic Writing Skills, Sentence Structures, Use of phrases and clauses in sentences, Importance of proper punctuation, Creating coherence, Organizing principles of paragraphs in documents, Techniques for writing precisely Identifying common errors in writing, Subject-verb agreement, Noun-pronoun agreement, Misplaced modifiers, Articles Prepositions, Redundancies, Clichés, Nature and Style of sensible writing, Describing , Defining, Classifying, Providing examples or evidence, Writing introduction and conclusion.

**Annexure K**

Office of the .....

Date: .....

**CERTIFICATE TO BE PRODUCED BY THE APPLICANTS BELONGING TO ANTHYODAYA  
ANNAYOJANA (AAY) AND PRIORITY HOUSE HOLD (PHH) CATEGORY**

(Vide G.O.(Ms.)No.2/2020/P&ARD dated 12.02.2020)

This is to certify that Shri/Smt/Kumari .....

Son/daughter/wife of ..... is a permanent resident of  
.....

.....(H.E.address) .....Village

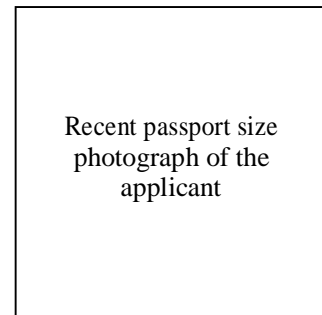
.....District, Kerala State, whose photograph is affixed below, is a member of Anthyodaya Annayojana (AAY)/Priority House Hold (PHH) and that his/her name is included in the Ration Card issued under this category and that he/she does not belong to a caste/class recognised as Scheduled Castes, Scheduled Tribes or Other Backward Classes in the State and therefore he/she belongs to Economically Weaker Sections in General Category.

Signature .....

Name.....

Designation .....

(Seal)



**ANNEXURE L**

**INCOME AND ASSETS CERTIFICATE TO BE PRODUCED BY ECONOMICALLY WEAKER SECTIONS (EWSs) IN GENERAL CATEGORY**

Certificate No.....

Date .....

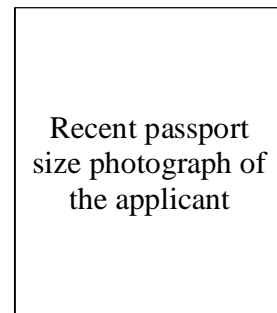
This is to certify that Shri/Smt/Kumari..... Son/daughter/wife of  
..... is a permanent resident of  
.....  
.....(H.E.address).....Village.....

Taluk .....District in Kerala, Pin Code. whose photograph is affixed below,  
belongs to Economically Weaker Sections in General Category (\*) and that his/her family income is at  
Rs. .... (in  
words also) for the financial year .....and that  
his/her family does not own or possess assets exceeding the limit specified in G.O.(Ms.)No.2/2020/P&ARD  
dated 12.02.2020 and that he/she belongs to caste/community/class which is not recognised as a Scheduled  
Caste, Scheduled Tribe or Other Backward Class as listed in List I, II and III in the Schedule to Rule 2 Part I, K.S  
& S.S.Rs, 1958.

Signature with Office Seal .....

Name .....

Designation .....



(\*) General Category means and includes all Castes, Communities and Classes of citizens other than Scheduled Castes, Scheduled Tribes and Other Backward Classes.

**Annexure M**  
**GUIDELINES FOR IMAGES TO BE UPLOADED**

For applying the candidate has to upload scanned images of photograph and signature to the application portal.

**Photograph of candidate:**

For applying online, the candidate must have a scanned/digital image of photograph. The Specification of photograph image should be strictly followed.

1. Photograph must be in colour with a light colour background, white is preferable. It must be taken by mobile phone/tab is not accepted
2. Photograph should be in passport size format and taken recently. Front view of full face and shoulder portion of candidate is to be seen clearly in the photograph.
3. The face of the candidate should be at the centre and straight.
4. Photo, wearing caps and dark glasses will be rejected.
5. Scanned image file should be in **jpg format** (Jpeg).
6. Dimensions of the photograph should be **150 pixels height** and **100 pixels width** and image file should be **between 15 kb and 30 kb** file size

**Points to be noted:**

1. If the face in the photograph is not clear or the image is not as per the above guideline, your application is liable to be rejected.

In Future, Your Admit Card, Data Sheet and Allotment Memo will be printed with the same photograph you have submitted at this stage. Moreover, in examination hall, the Invigilator has to verify the same photograph for identifying the candidate. So strictly follow the specifications and guidelines for the photo to be uploaded.

**Signature of Candidate**

1. On a plain white sheet, the candidate should put his/her signature with black /blue ink. Signature should be clear.
2. Scan this signature and crop around the signature. Do not scan the full sheet. Scanned image file should be in **jpg format** (Jpeg)
3. Dimensions of the image of signature must be **100 pixels** height and **150 pixels** width.
4. Image file should be between **10 kb** and **30 kb** file size.

Subsequent to selecting the two images, candidate needs to verify whether the photograph shown in the screen is clear and sufficient to identify the candidate. Press 'Upload Images' button to upload all images to the application portal. If you try to upload an image which is not in the prescribed format, an error message will be displayed in 'upload images' column. All images should match the corresponding specification. The images once uploaded cannot be changed after completing of 'Fill Application' step.

**Documents**

1. The file size. All documents uploaded in proof of various claims made in the application must be in PDF format. The documents must be legible and readable. kb 100kb to 30 should be from

**ANNEXURE N**  
**INSTRUCTIONS FOR FILLING OMR SHEET**

*Attention of Invigilator: At the end of exam, please fold at the perforation and then tear*

*Attention of Candidate: Please do not separate the pages of the Answer Sheet*  
**IMPORTANT: USE ONLY BLUE/BLACK BALL POINT PEN**

**ORIGINAL**

**SIDE A**

**(BASIC DATA)**

**OMR ANSWER SHEET**

**(ANSWERS)**

**NOTE**

- Please read the general instructions given overleaf for filling (If) each item given below.
- Any error in filling the required items may upset your performance.

1. **Paper** (Mark only if applicable)      2. **Version**

I	II	A	B
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. **Roll No.**

0	1	2	3	4	5	6	7	8	9
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0	1	2	3	4	5	6	7	8	9
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0	1	2	3	4	5	6	7	8	9

4. **Qn Booklet No.\***

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0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

5. **Name of the Examination**

6. **Date of the Examination**

7. **Roll No.**

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

8. **Qn. Booklet No.\***

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9

9. **Name of Candidate**

10. **Certified that the above entries are checked and found to be correct**

.....  
Signature of the Candidate

.....  
Signature of the Invigilator

IF A  
CANDIDATE  
TAMPERS WITH  
THE BARCODE,  
HE/SHE WILL BE  
DISQUALIFIED/  
DEBARRED



**BAR CODE**



**NOTE**

- Please read the instructions for making answers given overleaf.
- Start answering only when you are asked to do so by the Invigilator.

1.	○○○○○	61.	○○○○○
2.	○○○○○	62.	○○○○○
3.	○○○○○	63.	○○○○○
4.	○○○○○	64.	○○○○○
5.	○○○○○	65.	○○○○○
6.	○○○○○	66.	○○○○○
7.	○○○○○	67.	○○○○○
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10.	○○○○○	70.	○○○○○
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15.	○○○○○	75.	○○○○○
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19.	○○○○○	79.	○○○○○
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21.	○○○○○	81.	○○○○○
22.	○○○○○	82.	○○○○○
23.	○○○○○	83.	○○○○○
24.	○○○○○	84.	○○○○○
25.	○○○○○	85.	○○○○○
26.	○○○○○	86.	○○○○○
27.	○○○○○	87.	○○○○○
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29.	○○○○○	89.	○○○○○
30.	○○○○○	90.	○○○○○
31.	○○○○○	91.	○○○○○
32.	○○○○○	92.	○○○○○
33.	○○○○○	93.	○○○○○
34.	○○○○○	94.	○○○○○
35.	○○○○○	95.	○○○○○
36.	○○○○○	96.	○○○○○
37.	○○○○○	97.	○○○○○
38.	○○○○○	98.	○○○○○
39.	○○○○○	99.	○○○○○
40.	○○○○○	100.	○○○○○
41.	○○○○○	101.	○○○○○
42.	○○○○○	102.	○○○○○
43.	○○○○○	103.	○○○○○
44.	○○○○○	104.	○○○○○
45.	○○○○○	105.	○○○○○
46.	○○○○○	106.	○○○○○
47.	○○○○○	107.	○○○○○
48.	○○○○○	108.	○○○○○
49.	○○○○○	109.	○○○○○
50.	○○○○○	110.	○○○○○
51.	○○○○○	111.	○○○○○
52.	○○○○○	112.	○○○○○
53.	○○○○○	113.	○○○○○
54.	○○○○○	114.	○○○○○
55.	○○○○○	115.	○○○○○
56.	○○○○○	116.	○○○○○
57.	○○○○○	117.	○○○○○
58.	○○○○○	118.	○○○○○
59.	○○○○○	119.	○○○○○
60.	○○○○○	120.	○○○○○

\* Should be filled in after receiving the Question-Booklet.

*(Please Turn Over)*

**GENERAL INSTRUCTIONS**

The OMR Answer Sheet has an Original Sheet and a Candidate's Copy below it glued together at the top. Candidate should not separate the pages of the Answer Sheet. The items marked by the candidates in the original OMR Sheet will be carried over to the candidate's copy in the form of Impressions. Hence while marking in the Original Sheet, Candidate should ensure that the pages are aligned properly and enough pressure is given, so that the markings made in the Original Sheet against each item are exactly reproduced in the Candidate's Copy.

The Answer Sheet has two parts - "Basic Data" on the left side and "Answers" on the right, with a thin perforation in between, length wise.

All entries in the Answer Sheet are to be made in the Original Sheet only.

Fill in the boxes and darken the appropriate bubbles using a **black/blue ink ball point pen**.

Fill in all the entries on the "Basic Data" part before beginning to answer questions on the "Answers" part.

Entries regarding the Question Booklet No. should be filled in only after receiving the Question Booklet.

At the end of the Examination, the Candidate will hand over the OMR Answer Sheet to the Invigilator, who will first tear off the original sheet from the Candidate's copy. The Candidate's copy will be handed over to the candidate. Thereafter the Original sheet will be separated along the perforation in the presence of the Candidate.

**WARNING**

- Pen Marking once made is final.
- Trying to erase an already marked bubble might leave a hole (tear) on the OMR Sheet or make dark smudges which will give an improper result with OMR reader.
- Trying to darken an already erased bubble will also lead to an unpredictable result.
- In the case of improper bubbling/erasing/whitening etc, the reading of the OMR Machine will be taken as final and any arguments to defend such actions will not be entertained.
- To avoid any such misinterpretation, make sure that only one bubble corresponding to the correct response is darkened against each question. All other options should be left blank. Start darkening the bubble only after reading the question thoroughly and deriving at the correct response.
- Use of white fluid or any other correction fluid to erase the pen marking once made is not permitted.

**INSTRUCTIONS FOR MARKING ANSWERS**

Mark your answers by darkening the appropriate bubbles with a black/blue ink ball point pen. Do not use pencil. Use of fountain pen, Gel pen or sketch pen and use of any color ink other than black/blue are not permitted.

Marking should be dark and the bubbles should be filled completely.

Please darken only one bubble for each question.

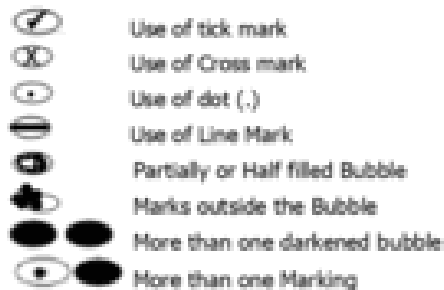
Once darkened, the bubble should not be erased.

Please make the marks only in the spaces provided. Do not make any stray marks ELSEWHERE in the Answer Sheet.

Correct method of marking answer.



Here are some wrong methods of marking answers



**ANNEXURE O**

**UNDERTAKING FROM THE STUDENTS AS PER THE PROVISIONS OF ANTI-RAGGING  
VERDICT BY THE HON'BLE SUPREME COURT OF INDIA**

I, Mr. /Ms. ....,  
Application No.....Course: .....student of  
..... do hereby undertake on this day ..... Month  
..... Year.....,the following with respect to above subject and Office Order  
No: .....

- 1) That I have read and understood the directives of the Hon'ble Supreme Court of India on anti-ragging and the measures proposed to be taken in the above references.
- 2) That I understand the meaning of Ragging and know that the ragging in any form is a punishable offence and the me is banned by the Court of Law.
- 3) That I have not been found or charged for my involvement in any kind of ragging in the past. However, I undertake to face disciplinary action/legal proceedings including expulsion from the Institute if the above statement is found to be untrue or the facts are concealed, at any stage in future.
- 4) That I shall not resort to ragging in any form at any place and shall abide by the rules/laws prescribed by the Courts, Govt. of India and Institute authorities for the purpose from time to time.

.....  
Signature of Student

I hereby fully endorse the undertaking made by my child/ward.

.....  
Signature of Mother/Father and or Guardian

Witness : .....

Signature of Mother/Father and or Guardian

Witness : .....

**ANNEXURE P**

**DISTRICT FACILITATION CENTRES OF LBS CENTRE FOR ANY ASSISTANCE**

<b>Sl no</b>	<b>Place</b>	<b>Address</b>	<b>Phone Number</b>
1	Thiruvananthapuram	LBS Centre Nandavanam, Palayam Thiruvananthapuram - 695 033	0471 - 2324396 0471 -2560363,364
2	Kollam	LBS Regional Centre First Floor, BSNL Karikode Telephone Exchange Building, TKM Road, Peroor, Kollam - 691005	0474 - 2970780
3	Adoor	LBS Sub Centre KRM Towers, East of Central Junction Adoor, Pathanamthitta	0473 - 4227538
4	Alappuzha	LBS Sub Centre Municipal Library Building Thattampally P.O, Alappuzha	0477 - 2254588
5	Pampady	LBS Sub Centre Kadavumbhagam Buildings Near Police Station, K.K.Road, Pampady, Kottayam.	0481 - 2505900
6	Kalamassery	LBS Regional Unit HMT Junction, NAD Road Kalamassery - 683 104.	0484 - 2541520 0484 - 2551466
7	Thrissur	LBS Regional Unit Alumvettuvazhi Road Chiyaram, Thrissur - 680 026	0487 - 2250657 0487 - 2250751
8	Palakkad.	LBS Sub Centre II Floor, Charutha Chambers, Noorani Shornur Road, Palakkad	0491 - 2527425
9	Manjeri	LBS Sub Centre Indira Gandhi Bus Terminal, Kacherypady Manjeri, Malappuram.	0483 - 2764674
10	Kozhikode	LBS Regional Unit 17/420, Indira Gandhi Road Kozhikode - 673 004.	0495 - 2720250
11	Wayanad	LBS Sub Centre M A Building, Opp. JaamJoom HyperMarket, Pinangode Road, Kalpetta,Wayanad - 673121	0493 - 6205939
12	Kannur	LBS Regional Unit Old Engg. College Campus Near S.N.Park, Kannur - 1.	0497-2702812
13	Kasaragod.	LBS Sub Centre IIIrd Floor, Municipal Shopping Complex, Old Bus Stand, Kasaragod -	0499-4221011