

Draft v 1.1

# Information Brochure, 2017

## Common Entrance Test

For  
Admission  
to

## Engineering Courses



**THE JAMMU AND KASHMIR  
BOARD OF PROFESSIONAL ENTRANCE EXAMINATIONS**

email: [helpdeskjakbopee@gmail.com](mailto:helpdeskjakbopee@gmail.com)

website: <http://www.jakbopee.org>

website: <http://www.jakbopee.net>

# THE JAMMU AND KASHMIR BOARD OF PROFESSIONAL ENTRANCE EXAMINATIONS

## BOARD EXECUTIVES

|                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------|
| <b>Chairman</b> <ul style="list-style-type: none"><li>• Mr. Mohammad Ashraf Bukhari, IAS (Rtd.)</li></ul>                    |
| <b>Controller of Examinations &amp; Secretary</b> <ul style="list-style-type: none"><li>• Mr. Khurshid Ahmad (KAS)</li></ul> |
| <b>FA/CAO</b> <ul style="list-style-type: none"><li>• Mr. Romesh Chander</li></ul>                                           |
| <b>Deputy Secretary (Law)</b> <ul style="list-style-type: none"><li>• Mr. P. L. Sharma</li></ul>                             |
| <b>Under Secretary</b> <ul style="list-style-type: none"><li>• Miss Saniya Malik (KAS)</li></ul>                             |
| <b>Under Secretary</b> <ul style="list-style-type: none"><li>• Mrs Shubi Tabasum</li></ul>                                   |

## MESSAGE

The Jammu and Kashmir Board of Professional Entrance Examinations (BOPEE), a creation under Jammu and Kashmir Board of Professional Entrance Examinations Act, 2002 has been mandated with the conduct of various entrance examinations for admission in different professional courses in the State. Board being an autonomous body, is required to discharge its duties in a transparent manner by promoting the cause of meritocracy in the conduct of examinations.



Notwithstanding the fact that some of the entrance examinations viz MD/MS/PG Diploma/MDS and Under Graduate Medical Courses, are now being conducted by the central agency under National Entrance-cum-Eligibility Test (NEET), yet, as a consequence, the role of the BOPEE does not get marginalized as the counselling for the allotment of seats etc will continue to be carried out by the State “Competent Authority”. With the introduction of the NEET, the candidates have to compete with the national standards and, therefore, hard work and keeping track of latest phenomenon in the field of education will assume greater significance. While as, it shall be our endeavour to maintain the highest standards and transparency in functioning of the Board, it would be advisable for candidates to upgrade their knowledge so that best amongst them get selected for the training courses. The Board has already introduced technological changes in the system and latest being inviting of applications on-line and endeavours to modernize and upgrading its functioning would continue. Subject to the logistical support, the Board aims at conducting on-line examinations at some point of time in future. It may take some time, but we are hopeful that it will be done as it is, the need of the hour and we cannot afford to lag behind national and international standards.

Now that the Central Board of Secondary Education is conducting the Common Entrance Test for MBBS/BDS and Ministry of Ayush have also informed that the candidates for Ayush Courses in the States shall be selected by the Competent Authorities out of the merit list of the candidates appearing in NEET (UG) Examination, the drawal of the State Merit List shall be the responsibility of the respective Competent Authorities. The Board shall, therefore, now be conducting the Common Entrance Test only in respect of Engineering Courses for different Institutions in view of the above. The demand for Engineering Graduates has ever been increasing but in view of qualitative changes taking place in the labour market, the candidates performing their in various examinations can compete better. Obtaining admissions in the Engineering Colleges is not end in itself but beginning of another process which has to be culminating at the employability of such candidates. It has be observed in the past that a large number of candidates having immense potential do not take this examination seriously, as a consequence whereof they do not fair well in the examination. It would, therefore, be adviseable for the candidates to work hard and raise the level of competition and make it difficult for the Board to draw the merit list without considering 4<sup>th</sup> or 5<sup>th</sup> decimal of merit of the candidates with equal scores. I think it is not easy but it is not difficult too to get through by hard work, patience, consistency, regular studies and of course by allotting sufficient time to all the subjects, which are important. It is endeavour of the Board to update the website and make it candidate friendly. We have dispensed with the process of uploading of documents this time except Photograph, Signature and Thumb Impression. The documents can be produced by the candidates at the time of counselling or after declaration of the result as may be decided by the Board.

The Board keeps its website [www.jakbopee.org](http://www.jakbopee.org) updated to transmit information to the stake holders at a faster speed. Since the changes, innovations, improvements and upgradation are a continuous and an ongoing process, therefore, it has been decided to open a suggestion box in the on-line website of the Board so that any suggestions for improvement in the system by the stake holders, is considered and examined by the Board. The things cannot remain stagnant as these have to change or else perish, therefore, the suggestions given by the stake holders for bringing innovations and improvements in the system would be of paramount importance and valuable for us.

I wish all the best of luck.

Mohammad Ashraf Bukhari, IAS (Rtd.)  
Chairman

## MESSAGE

The J&K BOPEE an organisation entrusted with the responsibility of conducting the Entrance Test for various Professional Courses including Engineering courses.



The Entrance Test for medical courses (MBBS/BDS etc.) for 2017 is being conducted by Central Board of School Education CBSE through NEET and the online applications forms have already been invited for this purpose. However, BOPEE shall conduct entrance test for the Engineering courses. The BOPEE has been striving to enhance transparency in conducting such tests and conduct of counseling so as to ensure that the merit of the students obtained by them after hard toil is maintained at all costs. The BOPEE assures the candidates that only their merit will determine their choice of stream and preference of college and under no circumstances the merit shall be compromised.

Aspiring students are now required to fill up the application form strictly in accordance with the guidelines contained in the Notification issued for admission to the MBBS/BDS courses. They will have to prepare themselves well in order to be able to raise their standard to a level which is commensurate with the national level test like NEET. This will entail putting in toil, hard work and focused attention from the students.

Khurshid Ahmad Shah, KAS  
Controller of Examinations

## CONTENTS

|     |                                                                                              |    |
|-----|----------------------------------------------------------------------------------------------|----|
| 1.  | INTRODUCTION                                                                                 | 6  |
| 2.  | TERMS AND EXPRESSIONS                                                                        | 6  |
| 3.  | GENERAL INFORMATION & INSTRUCTIONS                                                           | 7  |
| 4.  | ELIGIBILITY FOR ADMISSION                                                                    | 9  |
| 5.  | RESERVATION AND CATEGORY CODE                                                                | 10 |
| 6.  | FEE STRUCTURE (Tentative)                                                                    | 12 |
| 7.  | ONLINE APPLICATION FORM                                                                      | 13 |
| 8.  | ADMIT CARD                                                                                   | 15 |
| 9.  | CONDUCT OF ENTRANCE EXAMINATION                                                              | 16 |
| 10. | TIME SCHEDULE FOR THE CANDIDATES IN THE EXAMINATION HALL                                     | 18 |
| 11. | DETERMINATION OF MERIT                                                                       | 19 |
| 12. | DECLARATION OF RESULT                                                                        | 20 |
| 13. | COUNSELLING FOR ALLOTMENT OF DISCIPLINE/INSTITUTION                                          | 21 |
| 14. | SYLLABUS FOR COMMON ENTRANCE TEST -2017                                                      | 25 |
| 15. | INSTITUTIONS WITH COURSES AND TENTATIVE INTAKE CAPACITY                                      | 32 |
| 16. | ANNEXURES                                                                                    | 39 |
|     | Annexure-I Competent Authorities for Issuance of Reserved Category Certificates              |    |
|     | Annexure-II Income Certificate for Tuition Fee Waiver Category                               |    |
|     | Annexure-III Sample of OMR Answer Sheet                                                      |    |
|     | Annexure-IV Undertaking and Authority Letter for Counselling                                 |    |
|     | Annexure-V Undertaking for Counselling                                                       |    |
|     | Annexure-VI Sample of Counselling Form                                                       |    |
|     | Annexure-VII Seat Matrix of CET (PCM)-2017 in Different Disciplines/Institution              |    |
|     | Annexure-VIII Sample of Representation Regarding Answer Key                                  |    |
|     | Annexure IX Prohibition and Guidelines for Preventing Ragging                                |    |
|     | Annexure X Certificate of Being Child of Defence Personnel (in-Service)                      |    |
|     | Annexure XI Certificate of Being Child of Defence Personnel (Ex-Service Men)                 |    |
|     | Annexure XII Certificate of Being Child of Paramilitary Force/ Police Personnel (in-Service) |    |
|     | Annexure XIII Certificate of Being Child of Paramilitary Force/ Police Personnel ( Retired)  |    |

## 1. INTRODUCTION:

The Jammu and Kashmir Board of Professional Entrance Examinations (BOPEE) was established by an Act of the State Legislature (Act No. XXV of 2002). Under the Act, the BOPEE is entrusted with the task of conducting entrance tests and recommending candidates for admission to various professional courses in the State of Jammu and Kashmir. These, inter alia, include Engineering Courses as well.

The Central Board of Secondary Education invited applications from the eligible candidates for appearing in NEET Undergraduate MBBS/BDS courses, 2017 examination vide their Notice dated 31-01-2017 and last date for submission of online Application Forms has been fixed as 01-03-2017

The Central Council for Indian Medicine vide No. 12-18/2016 NEET dated 13-02-2017 and Government of India Ministry of AYUSH has vide their No:-13040/33/2016-HD (Tech) part dated 25-01-2017 communicated that the admission for BUMS/BAMS/BPT for the year 2017 shall also be made out of merit list drawn out of the selection process for MBBS/BDS and there shall be no management/NRI Quota, this shall include composite Regional Centre, (CRC) Bemina, Srinagar seats/ courses (BPT, DPO, DRT and DHLS).

The Common Entrance Test (CET) -2017 will be conducted for the purpose of determining merit of the students for admission the undergraduate Bachelor of Engineering (B.E) Courses in the Government run and privately managed institutions of the J&K State. The test will be conducted in accordance with the provisions of the J&K Board of Professional Entrance Examinations Act, 2002 and the Rules and Regulations made there under; Jammu and Kashmir Reservation Act, 2004, J&K Reservation Rules, 2005, AICTE Regulations/Guidelines issued from time to time and other relevant rules, orders, notifications and directions issued or to be issued by the Government of Jammu and Kashmir or by any regulating body.

The Electronic Information Brochure has been prepared to provide information to the candidates of the CET, right from the issuance of admission notification upto final selection for admission to various professional engineering courses. The most crucial step is the filling up of the Application Form which the candidates must do very meticulously. The selections are recommended according to the preference for courses and the Colleges/Institutions indicated by the applicant in his/her Counselling Form in order of merit secured in the CET. The candidates should, therefore, carefully go through the E-Information Brochure before filling their online Application Form. Any error at the initial stage may not get rectified later on and this may prove very costly to a promising student.

## 2. TERMS AND EXPRESSIONS:

Certain terms and expressions used in the E-Information Brochure have specific meanings unless, of course, the context otherwise denotes. For the benefit of the candidates, these terms and expressions are briefly defined hereinafter:-

- ❖ **Advertisement Notification:** means the notification issued by the BOPEE for inviting online Applications Form the eligible candidates for appearing in the CET-2017;

- ❖ **Application Form**: means the online Application Form available on the official website of the BOPEE to be submitted by the eligible candidates for appearing in the CET;
- ❖ **Available Seats**: means the seats against which admissions are ordered by the Government of Jammu & Kashmir;
- ❖ **CET**: means the Common Entrance Test for selecting candidates for various Bachelor of Engineering Courses;
- ❖ **Eligible Candidate**: means a candidate who fulfills the requirements of eligibility as prescribed by the BOPEE, the State Government, Affiliating Universities and other regulating agencies (including AICET);
- ❖ **Incomplete Form**: means the Application Form/Confirmation Page which is without any required documentary proof or is wrongly filled in or contains false information of any kind or not having required and /or valid certificates or has any other deficiency and discrepancy whatsoever;
- ❖ **Late Receipt: (Missing)**
- ❖ **Merit List**: means the list of candidates, who appear in the CET, drawn up in the descending order of inter-se-merit;
- ❖ **Private Educational Institutions**: Means the Institutions / Colleges established and or administered by registered societies, public trusts or religious and charitable trusts offering professional courses and duly approved/recognised by the Government of Jammu and Kashmir and regulating bodies such as AICTE and have affiliation of University of J&K as the case may be;
- ❖ **Qualifying Examination**: Means the 10+2 or equivalent examination passed from a Government recognized Board on the basis of which candidates become eligible to appear in the CET;
- ❖ **Rules**: mean the Jammu and Kashmir Board of Professional Entrance Examination Rules-2014; and
- ❖ **Regulations means**:-the Jammu & Kashmir Board of Professional Entrance Examination Regulations, 2016.

### 3. GENERAL INFORMATION & INSTRUCTIONS:

It is expected that the candidates shall be sincere, honest and behave responsibly while appearing in the entrance examination and shall not resort to any unfair/fraudulent means or impersonation in the examination. In case a candidate is found resorting to such acts, criminal proceedings shall be initiated against him/her including his/her abettors/facilitators, besides debarring him / her permanently from appearing in the Entrance Test in future.

- ❖ The candidates interested in appearing in the CET are required to:
  - go through E-Information Brochure carefully and acquaint themselves with all the requirements;
  - satisfy the prescribed eligibility conditions; and
  - submit online Application Form within the prescribed date.
- ❖ The candidates applying for admission will be required to appear in the CET at their own expenses;

- ❖ The recommendation for selection of the candidates in all the categories shall be subject to production of all the relevant certificates in original by the candidates and the verification of the same by BOPEE/College/University;
- ❖ No intimation, whatsoever, about non-selection will be sent individually and no correspondence in this regard shall be entertained. The result will, however, be available in both the offices of the BOPEE at Jammu and Srinagar for information and perusal of the candidates. The result will also be available on BOPEE's website: [www.jakbopee.org/](http://www.jakbopee.org/) / [www.jakbopee.net](http://www.jakbopee.net);
- ❖ The selection made by the BOPEE to the professional courses shall be provisional till final determination of eligibility of the candidates by the concerned University/ College;
- ❖ The BOPEE shall have power to review the provisional selection list at any time, notwithstanding the fact that the selected candidate has completed his/her admission formalities, where any bonafide error, lapse, mistake, fraud, cheating, misrepresentation, misinterpretation, impersonation or glaring injustice comes to its knowledge or is brought to its notice which has resulted in the inclusion of the candidate in the selection list. Mere selection in the list does not confer any right to admission of the candidate, if he/she is otherwise found ineligible at any time;
- ❖ Complaints against certificates, including those of reserved categories, will not be entertained as BOPEE is neither an appellate authority nor an investigating agency;
- ❖ Permission of candidates to appear in the CET shall be provisional, subject to their being eligible for admission to the courses for which he/she has applied;
- ❖ The answer key will be displayed on the BOPEE'S website in the evening on conclusion of last meeting of the test and will remain there for three days and thereafter will be removed. The candidates who have any complaint against an answer of a question in the Question Paper are free to make written representation supported by documentary proof of standard Text Books on the prescribed format available on the official website of BOPEE and in the BOPEE office at Srinagar/Jammu accompanied by the payment receipt of rupees 1000 paid by him/her at POS terminal at J&K BOPEE Srinagar/Jammu which should reach in the office (Srinagar/ Jammu) within three working days after the Key is made available and thereafter no representation will be entertained/accepted;
- ❖ The Answer Key will be got re-examined by the BOPEE on the basis of the representations so received and the revised key, if any, will be final and no complaint will be then entertained regarding the revised key. The revised Key will be uploaded on the website of the BOPEE. The revised Answer Key, if any, will be applied to Answer Sheets of all the candidates no matter whether they have made such representations or not;
- ❖ OMR Answer Sheets of candidates are machine graded and scanned / scrutinized and double checked with extreme care. As such, there shall be no re-evaluation/ rechecking of OMR Answer Sheets. No correspondence in this regard shall be entertained; and
- ❖ Re- totaling of marks will be allowed on written request along with payment receipt of Rs. 1000/- paid at the POS terminal at BOPEE office Srinagar/Jammu. The application will be received within 5 days after the declaration of result. Any application received after the stipulated time will not be entertained.

## Instruction for Photographs

Candidates must also follow the following instructions:

- Please ensure that the photograph is taken in a light coloured background;
- The photograph/signature/thumb-impression images to be uploaded in JPG/JPEG format;
- The maximum size of the photograph to be 500 KB and for signature/thumb-impression to be 200 KB;
- Photographs must be snapped on or after 01-01-2017;
- Photograph must be taken with name of candidate (as written in Application Form);
- The photograph must be snapped with a placard indicating name of candidate and date of taking photograph. In case name and date are written on the photograph after taking it, the application will be rejected; and
- The **name and date on the photograph** must be clear and legible.

*Sample Photograph:*



- ❖ Photograph should be without a cap and goggles. However, spectacles are allowed.

## **4. ELIGIBILITY FOR ADMISSION:**

The candidates applying for CET must fulfill the following eligibility conditions:

- ❖ They must:
  - be permanent residents of J&K State as defined in Section 6 of the Constitution of J&K;
  - have passed Hr. Sec. Part II (12<sup>th</sup> / 10+2) or an equivalent examination from a recognized statutory Board/University;
  - have obtained 50% marks in aggregate in 10+2 examination in case of open merit category and 40% in aggregate for reserved categories subject to provisions of Reservation Rules / or any other regulation on the subject;
  - have passed 10+2 examination with English, Physics, Chemistry and Mathematics as their elective subjects in case of admission to Bachelor of Engineering Courses; and
- ❖ The candidates appearing / appeared in 10+2 (12<sup>th</sup> class) Annual Examination can also apply to appear in CET-2017. However, such candidates have to produce their original marks cards before or at the time of counseling/ selection, if they figure in the list of the candidates declared qualified or called for counseling as the case may be. If a candidate has been called for counselling but has failed to secure required percentage of marks in the qualifying examination, he/she shall not be considered for admission.

- ❖ The candidates applying under TFW category are open merit candidates. They must fulfill eligibility conditions meant for open merit candidates.

## 5. RESERVATION AND CATEGORY CODES:

- ❖ The reservation is applicable only in Government-run Colleges / Institutions in the State as notified by the J&K Government. The percentage of seats to be allotted to each category shall be as under:

| S. No. | Categories                                                        | Category Codes | Reservation in %age                              |
|--------|-------------------------------------------------------------------|----------------|--------------------------------------------------|
| 1      | Open Merit (OM)                                                   | 06             | 50                                               |
| 2      | Reserved Categories                                               |                |                                                  |
| 2.1    | Scheduled Caste (SC)                                              | 07             | 08                                               |
| 2.2    | Scheduled Tribes:-                                                |                |                                                  |
| 2.2.1  | Scheduled Tribe, Gujjar & Bakerwal (STGB)                         | 08             | 06                                               |
| 2.2.2  | Scheduled Tribe, Leh District (STL)                               | 09             | 02                                               |
| 2.2.3  | Scheduled Tribe, Kargil District (STK)                            | 10             | 02                                               |
| 2.2.4  | Other Scheduled Tribes (STO)                                      | 11             | 01                                               |
| 2.3    | Socially and Educationally Backward Classes:-                     |                |                                                  |
| 2.3.1  | Weak and Under Privileged Classes, Social Castes (OSC)            | 12             | 02                                               |
| 2.3.2  | Residents of Backward Area (RBA)                                  | 13             | 20                                               |
| 2.3.3  | Residents of Area Adjoining Actual Line of Control (ALC)          | 14             | 03                                               |
| 2.4    | Children of Defense Personnel (CDP) *<br>(State Subjects only)    | 15             | 03                                               |
| 2.5    | Candidates possessing outstanding proficiency in Sports (SP)**    | 16             | 02                                               |
| 2.6    | Children of State Police Personnel and Paramilitary Forces (JKPM) | 17             | 01                                               |
| 2.7    | Tuition fee Waiver Scheme (TFW) ***                               | 19             | 05% over and above of sanctioned intake capacity |

The category Certificates should be on the prescribed format.

- ❖ **Rules 5 and 6 of the JK BOPEE Rules, 2014 deal with reservation of candidates for admission to various professional Courses. These Rules pertain to the candidates of CET also who claim benefit of the reserved category. These two rules have been reproduced verbatim hereinafter for the benefit of the candidates. They are advised to go through these Rules before they attempt to fill up their online Application Form.**
- ❖ **Reservation for candidates for admission to various Professional Courses:**
  - The reservation of admissions shall be applicable only in **Government-run Colleges** as notified by the Government from time to time, unless otherwise prescribed specifically or notified for any private College;
  - The percentage of seats to be allotted to each category shall be such as notified by the Government from time to time;
  - The benefit of reservation shall be available to the concerned candidate only if the valid reserved category certificate is available with him/her for its submission before the Board authorities at the time of counseling;

- Where a category certificate has not been issued by the designated authority, the candidate shall not be given an opportunity to revalidate it after the expiry of the last date for submission of the Application Form;
  - To avoid any inconvenience to the candidate, it was notified vide Public Notice dated 31-01-2017 in their own interest to keep the certificates ready including Reserved Category certificate;
  - The category certificate issued after the expiry of the last date for submission of Application Form shall in no case be accepted;
  - No under process certificate shall be accepted/ entertained at any cost. It includes under process certificate for the renewal of category certificate;
  - The category certificate must be valid at the time of submission of online Application Form as well as at the time of Counselling in the BOPEE office. Where a candidate has valid category certificate at the time of submission of the form but its validity period is to expire before the date of counselling, such candidate shall get his certificate renewed by or before the date of counselling, otherwise he/she will not get benefit of the category;
  - A candidate can apply/opt for one reserved category only and choice regarding reserved category once exercised shall be final and at no stage shall be allowed to be changed;
  - A candidate will be considered only for one reserved category for selection against the seats reserved for that category for which code has been recorded at relevant Serial No. of the Application Form even if he/she is eligible to be considered for seats available in more than one category; and
  - The BOPEE incorporates the seat matrix as far as possible in the E-Brochure for each course in the year.
- ❖ **Competent authority:** (i) Authorities competent for issuing reserved category certificates shall be such as notified by the Government from time to time: Provided that in the case of Children of Defense Personnel other than core service, a candidate having a certificate that his/her father is working in Defense Establishment (Military Engineering Service or other service of like nature) where salary is paid out from Defense Estimates is not entitled to the benefit of CDP Category;
- Where this certificate is wrongly accepted and the candidate gets admission on the basis of this certificate, the admission of such candidate will be cancelled as and when this wrong/ mistake comes to the knowledge of BOPEE or brought to its notice:
 

Provided further that the candidates having “Outstanding Proficiency in Sports” must submit their certificates to the Secretary, J& K Sports Council for awarding points which will be then officially forwarded to the BOPEE by the Sports Council. The BOPEE shall not be responsible where a candidate fails to submit certificates to the Council or Council fails to forward the points of a candidate to the BOPEE. It shall be the sole responsibility of the candidate to ensure that his/her sports points are forwarded by the Council to the BOPEE. The sports category candidates must upload one set of the sports category certificates within the last date prescribed for submission of the forms in the admission notification to be issued separately.
- ❖ The Children of serving BSF, CRPF, ITBP and CISF do not fall under CDP category but fall under the category of JKPM for which Category Code is different. The candidates claiming benefit of any of these categories must ensure under which category they fall and should accordingly enter the Category Code;
- ❖ The category candidates should ensure that their reserved category certificate is issued by the designated competent authority. All the category certificates issued/dated after

October, 2005 must be issued under SRO 294 of 2005. The certificates issued under earlier SRO will be accepted only if they are dated prior to October, 2005. The candidates should insist on the certificate issuing authority to make mention of SRO 294 in their certificates if they are issued after October, 2005;

- ❖ Where a category certificate has not been issued by the designated competent authority, the candidate will not be given an opportunity to validate it after the expiry of the last date for submission of the online Application Form. No notice will be given to a candidate whose category certificate has been found invalid by the BOPEE and such a candidate will be considered in open merit, if found otherwise eligible;
- ❖ The certificate issued after the last date for submission of Application Form is over will not be accepted;
- ❖ No person in the BOPEE is authorised to guide any applicant. The information furnished by the applicant in the online Application Form/ Confirmation Page shall be deemed to have been given by him/ her;
- ❖ It has been observed that candidates often get confused with 'SC' and 'OSC' reserved categories and enter incorrect Code numbers in their Application Forms. It is hereby made clear that 'SC' stands for "Scheduled Caste" category and 'OSC' stands for "Other Social Castes", which has a different category Code than 'SC' given in Brochure;
- ❖ 5% seats, over and above intake capacity, in Engineering courses are available for the candidates whose parent's annual income from all sources is less than rupees 4,50,000. Format of income Certificate is given at **Annexure-III**; and
- ❖ A candidate having valid TFW Certificate can make use of the same for claiming benefit of TFW Certificate.

## 6. FEE STRUCTURE (Tentative):

The fee structure has been furnished by the respective College authorities and the BOPEE is not in any way associated with it and has, therefore, no responsibility, if the fee is raised subsequently. The candidates are advised to enquire, in their own interest, the actual fee to be charged, from the College authorities.

| S. No. | Name of the courses | Name of the Institution                                                                                                         | Free Seats (Govt. Seats)    | Payment Seats |
|--------|---------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------|
| 1.     | B.E                 | i) GCET Jammu<br>= For candidates of J&K Board of School Education<br>= For candidates other than J&K Board of School Education | Rs.2,410.00<br>Rs. 2,690.00 |               |
|        |                     | ii) MIET, Jammu                                                                                                                 | Nil                         | Rs. 48,000.00 |
|        |                     | iii) SSM College of Engineering, Srinagar                                                                                       | Nil                         | Rs. 37,800.00 |
|        |                     | iv) MBS College of Engineering & Technology, Jammu                                                                              | Nil                         | Rs. 37,800.00 |
|        |                     | v) Yogananda College of Engineering & Technology, Jammu (YCET)                                                                  | Nil                         | Rs. 37,800.00 |
|        |                     | vi) Bhargava College of Engineering and Technology, Supwal Samba                                                                | Nil                         | Rs. 37,800.00 |

## 7. ONLINE APPLICATION FORM

- ❖ The Application Forms have to be **submitted online only** through BOPEE websites [www.jakbopee.org](http://www.jakbopee.org) / [www.jakbopee.net](http://www.jakbopee.net) (through URL's/ links provided for this purpose) within the prescribed date to be notified separately. The payment of rupees 800 (Rupees eight hundred only) as fee is to be made either online through the J&K BANK integrated Payment gateway with the help of any national Credit Card/Debit Card and net banking facility. The procedure for filing Application Form and eligibility etc of the candidates have been given in detail in the E-Brochure. The candidates must necessarily, in their own interest, go through this Brochure before attempting to fill up the online Application Form;
- ❖ The applicants are advised to fill the online Application Forms on their own or through a responsible person. The applicants can also contact the **Help Desk** of I.T. Section of BOPEE Jammu/Srinagar on 9596243215, 9596243216, 9596243219, 0191-2470102, 0191-2479371 (Jammu) 9596243217, 9596243218, 0194-2437647, 0194-2433590 (Srinagar) for any assistance/guidance in this regard on any working day within the last date prescribed for submitting Confirmation Page only;

### ❖ Submission of Online Application Forms

- The candidates have to submit Online Application Form and the original attested photo copies of Permanent Resident Certificate, Marks Certificate with other certificates at the time of counselling;
- The candidates claiming benefit of any reserved category certificate have to indicate it in relevant column along with its code number and have to upload its attested copies along with the Application Form. However, the candidates claiming benefit of any Sports Certificate have to submit their sports certificates to the sports council also within the prescribed date;
- The candidates can change/ modify their online Application Form at any time before they submit it. Once the form is submitted, the entries made therein cannot be changed. It is in the interest of the candidate to make double check before submitting the online Application Form. They are advised, in their own interest, not to share their login details with anybody, lest he/she may get an opportunity to change important details in the Application Form;

- ❖ The online application form has to submitted as follows;  
**NAME OF THE CANDIDATE (sample)**

|   |   |   |   |   |   |  |   |   |   |   |   |  |   |   |   |  |
|---|---|---|---|---|---|--|---|---|---|---|---|--|---|---|---|--|
| S | H | O | K | E | T |  | A | H | M | E | D |  | D | A | R |  |
|---|---|---|---|---|---|--|---|---|---|---|---|--|---|---|---|--|

**Father's Name**

|   |   |   |   |   |  |   |   |   |   |   |   |  |   |   |   |  |
|---|---|---|---|---|--|---|---|---|---|---|---|--|---|---|---|--|
| A | B | D | U | L |  | R | A | S | H | I | D |  | D | A | R |  |
|---|---|---|---|---|--|---|---|---|---|---|---|--|---|---|---|--|

- ❖ Enter the date, month and year of birth as per English Calendar as recorded in the Matriculation Certificate. Use numerals 01 to 12 for the month, 01 to 31 for the date, and four digits for the year;

**3<sup>rd</sup> of November, 1994**

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 0 | 3 | 1 | 1 | 1 | 9 | 9 | 4 |
|---|---|---|---|---|---|---|---|

**10<sup>th</sup> of February, 1991**

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 2 | 1 | 9 | 9 | 1 |
|---|---|---|---|---|---|---|---|

- ❖ A candidate will be considered for only one reserved category for selection even if he/she has more than one reserved category and the category that will be considered

will be the one whose category code has been recorded at relevant Serial No. of the Application Form. For example, if an applicant is a ward of a Police personnel (Code 17), and also hails from a Backward Area (Code 13) and belongs to Scheduled Caste too (Code 07) and he/she indicates Code. '07' at the relevant Serial No. of the Application Form, the candidate shall be considered for selection against the available seat for Scheduled Caste category only and his/her no other category will be considered; and

- ❖ At no stage the category option once exercised in the Application Form will be changed.

### Certificates to be produced / attached:

The candidates have to produce the following documents in original before or at the time of counselling provided they figure in the list of the candidates called for counselling or as the Board may notify from time to time in this regard.

- ❖ Certificate of permanent residence;
- ❖ Marks certificate of the qualifying examination issued by the concerned Board;
- ❖ Matriculation or equivalent examination certificate indicating Date of Birth; and
- ❖ Category certificate(s).

### INSTRUCTIONS and PROCEDURE FOR FILLING UP ONLINE APPLICATION FORM:

1. Candidate must read the instructions and procedure carefully before filling up the Online Application Form.
2. Application Form will be accepted "**online**" ONLY.
3. Payment of the Fee of Rs. 800 is to be made online through "Integrated Payment Gateway" with the help of any national Credit Card/Debit Card/facility. Please note that once an Application form is completely submitted, no changes will be allowed on the Application Form. Under any such arising situation, candidate will be required to make fresh application with a new payment of Rs. 800.
4. Candidate must read the instructions and procedure (given in the Brochure and Website(s)) carefully before filling up the Online Application Form.
5. Before applying online, candidate must ensure he/she has scanned image of his photograph, signature and thumb-impression in JPEG/JPG format scanned copies of Marks Sheet, Permanent Resident Certificate and Reserved Category Certificate saved on the computer. Candidate should also have his /her payment mode details handy. The size of the photograph should not exceed 500 Kb, and the size of signature and Thumb-impression should not exceed 200 Kb.
6. Login to [www.jakbopee.net](http://www.jakbopee.net) to apply online. Candidate may click the link **CET (Engineering)–2017** to apply online.
7. Web Page having various tabs/urls (e-Notification, e-Brochure, e-Instructions, e-Application, e-Application Status and e-Admit Card) will be shown.
8. By clicking on the each active tab/link like Notification, Brochure, and Instructions etc. candidate can view and go through the respective information.
9. By clicking on the e-Application Tab/Link a web page with few instructions regarding PET-2017 will be shown. This page also has two buttons "**REGISTER**" and "**LOGIN IF ALREADY REGISTERED**". Click on **REGISTER** button to create/initiate a fresh application.

10. **Candidate registration** page will be displayed where you can provide the requisite/required details and then click on “**GENERATE APPLICATION NO**” button to get registered and generate an Application No. for yourself. Please select/enter your category, DOB etc on this page carefully as they can not be changed at a later stage.
11. Candidate is required to carefully note his/her Application Number for future reference and also not to share these details with anyone else.
12. Once Application Number is generated, candidate is required to **LOGIN** with Application Number and Date of Birth to complete the form with other details.
13. Web Page **PAYMENT INFORMATION** will be displayed to help you make the payment of Entrance Test fee online. After reading the instructions on this page click on “**Pay 800**” button to go to the payment gateway page where you can select your option for payment.
14. Candidates are required to first make payment for the Application Number generated before proceeding to fill the Application Form Details. THIS IS MANDATORY. Candidate can only pay online through the “Integrated Payment Gateway” with the help of any national Credit Card/Debit Card/ Net Banking facility.
15. After successful payment of fee online web page **PERSONAL INFORMATION** will be displayed where candidate needs to submit the required details (personal, address, residential, academic etc) and then click the “**SAVE & CONTINUE**” button.
16. Candidate will now be directed to web page **Upload Images** to upload photo, signature and left thumb impression as required. Please note that PST images should be uploaded in JPEG format only.
17. Once successfully uploaded, two buttons “**EDIT APPLICATION**” and “**PREVIEW CONFIRMATION PAGE**” will appear at the bottom of this page.
18. At this stage candidate may click on EDIT APPLICATION button if he/she wishes to make any change to the previously entered details in Personal Information Page otherwise candidate may click on the Preview Confirmation Page button to view the Provisional Confirmation Page.
19. Web page **PROVISIONAL CONFIRMATION PAGE** will be shown with candidate’s complete details as recorded. Candidate is required to thoroughly check all credentials/details and make corrections (if any) by pressing the **MODIFY** button as this is the final chance to modify/correct his/her details.
20. If all the details are correct, then only, candidate should click on “**SUBMIT APPLICATION FORM**” button. Candidate has to check mark/accept the declaration given at the bottom of this page prior to submitting the form.
21. The candidate’s form will be locked for verification process and Confirmation Page in the printable form will be displayed. Candidate is required to click on the “**PRINT**” button at the bottom to print the Provisional Confirmation Page and retain the same for future reference purposes/admission procedure.
22. After doing so, candidate should click on “**LOGOUT**” button to ensure that his/her form credentials are in safe hands.

## 8. ADMIT CARD:

- ❖ No candidate shall be allowed to enter Test Centre/venue without valid Admit Card;
- ❖ Admit card can be downloaded within the prescribed date. However, mere possession of admit card shall not if so-facto confer eligibility on a candidate who is otherwise ineligible to appear in the CET;

- ❖ The Admit Cards will be available online. The candidates are advised to download their Admit Cards from the BOPEE official Websites ([www.jakbopee.net](http://www.jakbopee.net) or [www.jakbopee.org](http://www.jakbopee.org) or [www.jkbopee.in](http://www.jkbopee.in)) on photo paper printed in colour. The candidates will be informed through a separate notification regarding the date for downloading of admit cards. Applicants are therefore advised to keep themselves updated with the information on the official website;
- ❖ The candidates are required to paste attested photo on the downloaded Admit Card at the space earmarked on it;
- ❖ Applicants, who don't have internet facility, may avail this facility at the **Help Desk** of I.T. Section of BOPEE with prior telephonic appointment, on nominal fee of Rs. 100/=, on any working day at the below mentioned BOPEE offices:
  - BOPEE Office, Bhagat-i-Barzullah, opposite J&K Bank, Srinagar-190005 (11 A.M. to 5 P.M.)
  - BOPEE Office, 4th Floor, South Block, Bahu Plaza, Jammu-180012 (11 A.M. to 5 P.M.)
- ❖ Candidates shall have to preserve admit cards till the allotment of seats/completion of selection/admission process; and
- ❖ Admit card is an extremely important document. It should not be mutilated, defaced or changed in any manner which makes it doubtful.

#### Nature of Question Paper:

- It shall be the sole responsibility of the candidate to check the Question Booklet before attempting to answer any question. Where a Question Booklet has any missing page, blank page, missed question or damaged or defaced page, it shall be the responsibility of the concerned candidate to bring it into the notice of the concerned invigilator and get it replaced by a new Booklet of the same series. The Question Booklet must have 60 questions per subject. No complaint in this regard shall be entertained by the Board after the conclusion of the examination;
- The question paper shall be objective type containing Multiple Choice Questions (MCQ's). It contains several pages stapled together in one cover. The questions are based on knowledge understanding and application of the relevant subject that a 10+2 student is expected to know in entrance test meant for admission to Engineering Courses;
- Do not break the seal containing Question Book let until you are asked to do so;
- Write your Roll Number on the cover page of the Question Book let at the space provided for the purpose;
- Candidates should not make any type of marking on the Question Booklet. Paper for rough work is included in the Question Booklet; and
- Each question paper has four series, which are in alphabets i.e. A, B, C and D printed on the cover page of the Question Booklet. At the end of the examination, candidates can take the Question Booklets with them.

## 9. CONDUCT OF ENTRANCE EXAMINATION:

- ❖ CET shall consist of a single paper with three sections comprising of Physics and Chemistry and Mathematics with 180 questions (60 questions from each section). The questions shall be multiple choice objective type with one mark each. There will be **0.25 negative marks** for each wrong answer;
- ❖ The details of subject combination, total marks for each paper and time duration are as follows:

| Name of the Stream | Number of papers           | Subjects                         | No of Questions | Time Duration |
|--------------------|----------------------------|----------------------------------|-----------------|---------------|
| <b>PCM</b>         | Single<br>(Three Sections) | Physics, Chemistry & Mathematics | 180             | 3 Hours       |

❖ **Centres of Examination:**

- The Entrance Test shall be held at the centres as may be notified by the BOPEE in the cities of Srinagar and Jammu only;
- Centres shall be allotted by the BOPEE and the information regarding this shall be provided to the candidates on the admit card; and
- The Test Centre once allotted shall not be changed.

❖ **OMR Answer Sheet:**

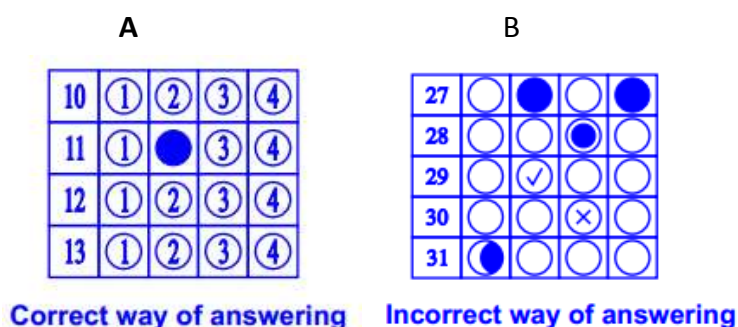
- It shall be the sole responsibility of the candidate to check the OMR Sheet before attempting to answer any question. Where an OMR Sheet is damaged or defaced or blank page, it shall be the responsibility of the concerned candidate to bring into the notice of the concerned Invigilator and get it replaced by a new OMR Sheet;
- The OMR Sheets (Optical Mark Reader Answer Sheets) are used in order to simplify the procedure for evaluation of the Answer Sheets and also to ensure highest accuracy. Each circle on the OMR Sheet has an alphabetical or numerical value. So a small mistake in shading the round spot on the circle may cost a seat to a candidate. Each OMR Answer Sheet has candidate's carbonless copy along with it. The candidates are advised to separate the candidate's copy (carbonless) as per procedure given in the Answer Sheet and take it along after the completion of paper. They are advised to preserve carbonless copy till the counselling for the admission is over. They may be asked to produce carbonless copy of OMR Sheet at any time so it is in their interest not to destroy it;
- The OMR Sheets will be supplied to the candidates in the examination hall;
- There are few blanks in the OMR Answer Sheet, which are to be filled in carefully;
- Write Question Booklet Number, Booklet Series, Paper Code and Roll Number in numerical on the Box meant for this purpose and also darken the appropriate circles. In case of any difficulty, seek the assistance of the invigilating team;
- Write the given "certification statement" in your running handwriting in English and append your signature and left hand thumb impression at the space provided for the purpose on your OMR Sheet. This certificate is to be authenticated by the invigilator and superintendent of the examination centre;
- Complete the formalities and wait for the signal to start, tear and open the seal, open the Question Booklet, start reading and answering the questions;
- Recording wrong Roll Number. or Question Paper Series or its omission on OMR Sheet shall be done by the candidate at his/her own risk. The candidate must report it within three days after conclusion of the Entrance Test. The BOPEE shall, in no case, entertain thereafter any complaint of the candidate in this regard; and
- Each question will be provided with four responses as (a), (b), (c), and (d). Indicate the most appropriate answer in the OMR Answer Sheet.

### For Example Q.11

In which part of the J&K is Pangong lake located:

1. Srinagar
2. Ladakh
3. Jammu
4. Kargil

The correct response is (2). Locate the question number in the OMR Answer Sheet and darken the circle under column(2) as shown below:



Ensure that the circle is completely darkened. Incomplete or faintly darkened circle will be rejected by the Optical Scanner and consequently no marks will be awarded for the same. On the contrary, negative marks will be awarded in such a case.

If more than one circle is darkened completely or faintly or any stray or marks is put in or around an oval or if the response is marked in any other manner as shown at "B" it shall be treated as a wrong answer. Even where a candidate finds two options correct, he/she should darken only one circle and shading of both the options will make answer incorrect

- In case the candidate does not follow the instructions given on the Answer Sheet, his/her Answer Sheet is likely to be rejected whenever detected.
- The information given in the form of numbers or alphabets in the OMR Answer Sheet must correspond with the information given in its Ovals as the machine reads Ovals and not the numbers or alphabets and in case of any variation, the information given in Ovals shall be treated as final. It is, therefore, in the interest of the applicant to check the OMR Sheet meticulously before leaving the examination hall to ensure that there is no discrepancy and in case of any doubt, the assistance of the invigilating staff may be sought.

## 10. TIME SCHEDULE FOR THE CANDIDATES IN THE EXAMINATION HALL

### Single Paper - [PHYSICS, CHEMISTRY AND Mathematics]

| Morning Session   | Work Schedule                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>10:25 A.M.</b> | Reporting time in the Examination Hall                                                                                                                                                                                                                                                                                                                                                  |
| <b>10:30 A.M.</b> | The invigilator shall ascertain the identity of each candidate by comparing his/her facial appearance with the photographs given on the admit card, and attendance sheet. The centre Superintendent shall also check the identity of the candidates and ensure that only the genuine candidates have been allowed to sit in the examination hall and there is no case of impersonation. |
| <b>10:45 A.M.</b> | Candidates will be given OMR Answer Sheets. They will go through instructions on the Answer Sheet.                                                                                                                                                                                                                                                                                      |
| <b>10:55 A.M.</b> | They will be given Question Booklet. The Question Booklet number is to be entered on the Answer Sheet.                                                                                                                                                                                                                                                                                  |
| <b>11 A.M.</b>    | They will break open the seal of the Question Booklet and start attempting the questions.                                                                                                                                                                                                                                                                                               |
| <b>2 PM</b>       | Paper- ends<br>The candidates will remain in their seats till they hand over the Answer Sheets to the invigilator and leave the examination hall only when they are asked to do so.                                                                                                                                                                                                     |

## 11. DETERMINATION OF MERIT:

- ❖ The merit list for each course shall be prepared on the basis of inter-se merit of the candidates in the CET 2017 in the descending order for Open Merit Category and for each Reserved Category, separately;.
- ❖ It shall be necessary for a candidate to obtain at least the minimum qualifying marks in the Entrance Test for the Courses as prescribed for different categories under the Jammu and Kashmir Reservation Rules;
- ❖ Any subsequent vacancy caused by whatsoever reason in any category, shall be filled from amongst the candidates of that particular category strictly according to merit. In the event of non-availability of eligible candidates from that reserved category, the relevant vacancies shall go to the open merit category;
- ❖ In case two or more candidates obtain equal merit, the inter-se-merit of such candidates shall be determined as under:

### ➤ B.E. Courses

1. Candidates obtaining higher marks in Mathematics in CET.
  2. Candidates obtaining higher marks in Physics in CET, if marks in Mathematics are equal.
  3. Candidates older in age to be preferred if points as per (1) and (2) are equal
- ❖ The BOPEE shall make the answer key available on its website in the evening on the conclusion of last meeting of the examination for students to make representation, if any;
  - ❖ The students can make representation, if any, against any question in the question paper on the prescribed format within a period of three working days upto 4 pm after the conclusion of the Entrance Test on day two;

- ❖ The representations should be supported by the documentary proof, based on standard text books and accompanied with the payment receipt of Rs. 1000/- per representation per paper paid by him or her at the POS terminal at J&K BOPEE office Sgr./Jammu. The material downloaded from the Internet will not be accepted as it is uploaded without any editorial review;
- ❖ No representation after the stipulated date shall be accepted because that will delay declaration of result and completion of admission process which has to be concluded within the prescribed time laid down by the Hon'ble Supreme Court and other regulatory bodies. The candidates interested in making representation should not wait for separate notification for this purpose and this information shall be deemed as notice to all the concerned candidates. The candidates must obtain a proper receipt in which number of questions represented against, the name of the paper/subject and series will be prominently mentioned. No claim of the candidates will be entertained on this count if he/she is not having receipt of the BOPEE with signature and seal;
- ❖ The representations shall be consolidated by the BOPEE and will be examined by subject experts whose opinion will be final;
- ❖ The revised key will be uploaded on the website for general information but no representation will be entertained against revised key so that whole admission process is completed within the prescribed time schedule and does not protract endlessly. The revised key will be applied for evaluation of all the Answer Sheets including Answer Sheets of those candidates who have not made any representation;
- ❖ The evaluation of the Answer Sheets is done mechanically so there is no chance of any mistake. The result declared by the machine shall be final and not open to any manual check. It has been noticed that some candidates make faint marks or ambiguous impressions or incomplete marks on the OMR Sheets which are scanned by the machine and the decision of the machine will be final and not subject to any manual check. It is, therefore, in the interest of the candidates to fill up OMR Sheet carefully as shown in this E- Brochure. The re-evaluation of the Answer Sheets manually, therefore, or otherwise, is not allowed as that will impinge upon the rule of equality which calls for uniform treatment given to all the candidates. However, re-totalling of marks will be allowed on written request accompanied by the payment receipt of rupees 1000 paid by him/her at POS terminal at J&K BOPEE Srinagar/Jammu. The application will be received within 03 (three) days after the declaration of result. Any application received after this date shall not be entertained; and
- ❖ Rule 13 of the JK,BOPEE Rules 2014 lays down the procedure relating to incorrect questions which is reproduced verbatim herein below for the benefit of the candidates.

- **“13. Deletion of invalid questions and methodology in evaluating such questions:** If during the course of examination / after the completion of examination but before final stage of evaluation, any question is reported to be admittedly wrong or has wrong options/ more than four options or has all options correct or is having a major printing error in questions/options, such of the questions shall not be evaluated for declaration of results. However, where two answers to a question are correct, the candidates attempting any one of the questions will be awarded marks”

## 12. DECLARATION OF RESULT:

The declaration of credible result free from errors is possible only when the persons involved with processing and evaluation of the OMR Sheets get minimum required time.

The candidates are advised to remain patient and every effort will be made to declare the result at the earliest but only after the representations are thoroughly examined by the subject experts.

### 13. COUNSELLING FOR ALLOTMENT OF DISCIPLINE/INSTITUTION:

The candidates, at times, take counselling very lightly and do not join the allotted streams/Institutions of their choice exercised by them during counselling which leads to repeated rounds of counselling, thus delaying the admission process abnormally. Hence, they are advised to participate in counselling process seriously.

- a. The Board may resort to the filling up of Online Preference Form by the eligible candidates as part of the counselling and dispense with the physical presence of the candidate during the course of counselling. This is to avoid rush of the candidates and make the process a hassle free one. The details of online counselling shall be notified by the Board before hand if such a decision is taken by it.
  - b. Physical presence of the candidate at counselling in case (a) above is not followed.
- ❖ Counselling is an extremely important component in the process of selection which affords the candidates an opportunity of indicating their choices/ preferences about allotment of disciplines/institutions. The candidates should make a realistic assessment of the streams which they are likely to get and should exercise options accordingly during counselling on the option form given in [Annexure-VI](#). The candidates must come for counselling along with all documents in original; admit card and a payment receipt of Rs. 500/- paid at the POS terminal at BOPEE office Srinagar/Jammu. The fees can also be paid through swap machine available at BOPEE office, Srinagar/Jammu. However, in exceptional cases, where the BOPEE is satisfied on the basis of documentary proof that the applicant is an orphan or is living in an abject poverty, the fee charged may be refunded if he/she fails to take admission due to some unavoidable reasons beyond his/her control;
  - ❖ Where a candidate decides in the counselling hall to withdraw his/her counselling form, he /she is entitled to refund of full amount of rupees 500 but not the late fee which he/she may have paid due to missed admission or missed counselling. Withdrawal from counselling is allowed only from first round of counseling;
  - ❖ The candidates should indicate clearly multiple choices of disciplines / institutions in the counselling form which they want to join in order of preference. For example, if a candidate indicates his options in the following manner:
    - GCET-Jammu.
    - MIET- Jammu.
    - MBS- Jammu.
    - SSM- Srinagar.
    - YCET- Jammu.
    - BCET-Jammu
  - ❖ Such candidates will be first considered for allotment of Engineering – GCET-Jammu. If on merit, the candidate does not qualify for allotment of such a seat, or no seat is available at his or her turn he/she can then be considered for allotment of MIET-Jammu,

then for MBS- Jammu, then for SSM-Srinagar, then for YCET- Jammu and finally for Engineering in BCET-Jammu

- ❖ The selection will be recommended strictly on the basis of merit of eligible candidates determined by the rank obtained in the entrance examination. Allotment of streams / institutions shall be made through counselling. The candidates will be called for counselling one after the other in order of rank for allotment of discipline / institution. Rank wise counselling schedule will be published in two leading English newspapers of the State. It will be also available on the official website of BOPEE. However, this process is subject to the change which the BOPEE may deem proper;
- ❖ No separate intimation will be sent to individual candidates for appearing in counselling sessions;
- ❖ The candidates have to appear personally for counselling. If, however, for some unavoidable reasons, it is not possible for a candidate to appear personally, he / she may send his / her duly authorised representative with admit card, payment receipt from POS terminal of BOPEE, original documents, undertaking and authority letter to the effect that allotment made on the basis of choices indicated by such representative shall be binding on him/ her. Formats of an undertaking and authority letter are given in **Annexure-V**;
- ❖ Where a candidate or his/her representative fails to appear for counselling on the specified date but intends to appear on the next date or any date during subsequent notified counselling schedule, he/she will be allowed to participate in such counselling after furnishing satisfactory justification in writing for such a failure along with payment receipt of Rs. 500/- from POS terminal from BOPEE Srinagar/ Jammu and he/she will be considered for the allotment of course/stream/institution available at that point of time on merit. Such candidate shall be required to furnish an undertaking to the effect that he/she voluntarily accepts the available stream/ institution at the time of his/her turn of counselling;
- ❖ Where a candidate fails to complete admission formalities within the stipulated time but intends to appear on any date during subsequent notified date of counselling, he/she will be allowed to participate in such counselling after furnishing satisfactory justification in writing for such a failure along with payment receipt of Rs. 500/- from POS terminal at BOPEE Srinagar/ Jammu and he/she will be considered for the allotment of course/stream/institution available at that point of time on merit. Such candidate shall be required to furnish an undertaking to the effect that they voluntarily accept the available stream/ institution at the time of his/her turn of counseling;
- ❖ Where a candidate has been kept in the waiting list but his/her seat is not confirmed, he/she is entitled to refund of counselling fee;
- ❖ Where a candidate or his authorized representative fails to appear for counselling at the time of his/her turn of counselling, his/her seat shall be allotted to the next candidate in order of merit and if the candidate, who has missed the counselling, appears afterwards in the counselling on the same or some other day, he/ she shall be allotted the seat available at that time. **The candidates are advised , in their own interest, not to miss**

**counselling, lest they may lose the seat of their choice which they have earned by their sheer hard labour;**

- ❖ Candidates shall have to join the course after allotment of streams/ institutions within the specified time period. Where a candidate does not join the course within the period so prescribed, his/her seat shall automatically stand cancelled and the same shall be filled up as a vacant seat;
- ❖ The short fall, if any, of the seats received by the BOPEE from different colleges after first round of counselling shall be filled up in another round of counselling as per the merit and availability of seat;
- ❖ Where a candidate is allotted a seat in the upgradation counselling, his/ her left over seat will be allotted to another candidate in order of merit;
- ❖ Where a candidate fails to join the course/ Institution allotted to him/her in second round of counselling, the seat allotted to him/her in the previous round of counselling will get automatically cancelled. He /she shall have no claim on the seat. However, he/she is eligible to appear in counselling held subsequently;
- ❖ The residual seats, which will become available after second round of counselling, will be allotted in the third round and so on;
- ❖ Where the number of the candidates, who turn for counselling, is more than the seats available, then a waiting list will be prepared. The waiting list will operate after receiving a list of vacant seats from the respective Colleges;
- ❖ The candidates may be kept in the waiting list and the number of the candidates to be kept in the waiting list will be as decided by the BOPEE;
- ❖ The number of the candidates to be called for counselling will be decided by the BOPEE keeping in view the response of the candidates to a particular course;
- ❖ The decision of the BOPEE concerning allotment of streams and institutions shall be final. Choices of streams / institutions once exercised shall not be allowed to be changed subsequently;
- ❖ Subject to any change by the Regulatory authorities or BOPEE, the admission to
  - Engineering courses will close on August 15, 2017. Thereafter no admission will be made to any of these courses even if any seat remains vacant.
    - Where a candidate does not get a seat of his/her choice at his/her turn of counselling, he/she shall be placed in the waiting list if he/she so indicates in the counselling form. The waiting list will operate immediately after the expiry of the last date mentioned in the selection list and after receiving short fall from the Colleges. The candidates in the waiting list shall have to report in the concerned College. Their reporting time is 10 a.m. to 2 p.m. and thereafter the College authorities shall operate the waiting list strictly according to the merit within the prescribed timeline. If the candidate with higher merit fails to report within the stipulated time, he/she shall forfeit his/her right of admission.
    - It is quite possible that a candidate may not find seat of his/her choice available at the time of his /her turn in second round of counselling but a seat may become vacant subsequently. It is, therefore, in the interest of the candidates to remain available outside counselling room and keep watching monitor on which seat matrix is constantly updated. As and when seat of the choice of such candidate

becomes available he/ she should immediately report in the counselling hall. The interested candidates are also advised to visit website of BOPEE every evening or next day in the morning (during counselling days) where latest seat matrix is displayed. This holds true for already counseled students who may find seat of their choice available and may get that because of their higher merit for which they shall have to report early in the next morning at 10 am so that such candidates can be considered in order of merit before the counselling starts for fresh candidates.

**NOTE-1:-**

Every effort will be made to ensure that the candidate with higher merit gets seat of his/ her preference if available. However, this is possible only when every candidate reports on time and follows instructions in letter and spirit, as otherwise due to the late reporting he/she could be deprived of the seat of his/her preference due to its allotment to the next candidate in merit, failing which the candidate who reports on time but is with lower merit may get seat more in demand than the candidate with higher merit who does not report on time for which BOPEE will not be in any way responsible.

## 14. SYLLABUS FOR COMMON ENTRANCE TEST -2017

***Note: The marks distribution given in the syllabus is only illustrative. It will not accrue any right to the candidate, if this distribution of marks is not strictly reflected in the question paper.***

# PHYSICS

### UNIT 1: PHYSICAL WORLD AND MEASUREMENT

(Marks: 02)

S I units, Fundamental and derived units. Accuracy and precision of measuring instruments, Errors in measurement, Significant figures. Dimensions of Physical quantities, dimensional analysis and its applications.

### UNIT 2: KINEMATICS

(Marks: 03)

Motion in a straight line: Position-time graph, speed and velocity. Elementary concepts of differentiation and integration for describing motion. Uniform and non-uniform motion, average speed and instantaneous velocity. Uniformly accelerated motion, velocity-time graph, position-time graphs, relations for uniformly accelerated motion, (graphical treatment and calculus approach). Scalar and Vector quantities, addition and Subtraction of vectors, general Vector and notation, Relative Velocity. Scalar and Vector products of two vectors with properties, Unit Vector, Resolution of a Vector in plane rectangular components, Motion in a plane, Projectile Motion.

### UNIT 3: LAWS OF MOTION

(Marks: 02)

Concept of force and Inertia, Newton's First Law of motion; Momentum and Newton's Second Law of motion, Impulse; Newton's Third Law of motion. Law of conservation of linear momentum and its applications, Equilibrium of concurrent forces. Friction, static and kinetic friction, laws of friction, rolling friction.

Dynamics of uniform circular motion: Centripetal force and examples of circular motion (vehicle on level circular road, vehicle on banked road.)

### UNIT 4: WORK, ENERGY AND POWER

(Marks: 02)

Concept of scalar products of vectors, Work done by a constant force and variable force; kinetic energy, work energy theorem, power. Potential energy, Potential energy of spring, conservative forces, conservation of mechanical energy (K.E. and P.E.), non-conservative forces; Elastic and inelastic collisions in one and two dimensions.

### UNIT 5: MOTION OF SYSTEM OF PARTICLES AND RIGID BODY

(Marks: 02)

Centre of mass of a two-particle system, Centre of mass of a rigid body; Concepts of vector product of vectors: moment of a force, torque, angular momentum, conservation of angular momentum with some examples. Moment of inertia, radius of gyration. Values of moment of inertia for simple geometric objects (no derivation), statement of parallel and perpendicular axes theorems and their applications. Rigid body rotation and equations of rotational motion.

### UNIT 6: GRAVITATION

(Marks: 02)

The universal law of gravitation. Acceleration due to gravity and its variation with altitude, depth and shape, Kepler's laws of planetary motion. Gravitational potential; gravitational potential energy. Escape velocity. Orbital velocity of satellite. Geo-stationary satellites.

### UNIT 7: PROPERTIES OF BULK MATTER

(Marks: 02)

Elastic behavior, Stress-strain relationship. Hooke's Law, Young's modulus, bulk modulus, shear modulus of rigidity. Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes) Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, Reynolds number. Bernoulli's theorem and its applications Surface energy and surface tension, angle of contact, applications of surface tension – ideas to drops, bubbles and capillary rise. Heat, temperature, thermal expansion; specific heat, calorimetry; change of state-latent heat. Heat transfer-conduction, convection and radiation, Newton's law of cooling.

**UNIT 8: THERMODYNAMICS****(Marks: 02)**

Thermal equilibrium and definition of temperature (zeroth law of thermodynamics), Heat work and internal energy. First law of thermodynamics. Second law of thermodynamics: reversible and irreversible processes. Heat engines and refrigerators (concept only)

**UNIT 9: BEHAVIOUR OF PERFECT GAS AND KINETIC THEORY****(Marks: 02)**

Equation of state of a perfect gas, work done on compressing a gas. Kinetic theory of gases – assumptions, concept of pressure. Kinetic energy and temperature: rms speed of gas molecules; Degrees of freedom, Law of equipartition of energy (Statement only) and applications to specific heat capacities of gases; concept of Mean free path, Avagadro's number.

**UNIT 10: OSCILLATIONS AND WAVES****(Marks: 04)**

Periodic motion – Period, frequency, displacement as a function of time. Periodic functions. Simple harmonic motion (S.H.M.) and its equation; phase; oscillations of a spring-restoring force and force constant; energy in S.H.M. – kinetic and potential energies; Simple pendulum-derivation of expression for its time period; Free, forced and damped oscillations, resonance. Wave motion. Longitudinal and transverse waves, speed of a wave. Displacement relation for a progressive wave. Principle of superposition of waves, reflection of waves, Standing waves in strings and organ pipes, fundamental mode and harmonics, Beats, Doppler effect.

**UNIT 11: ELECTROSTATICS****(Marks: 04)**

Electric charges: Conservation of charge, Coulomb's law-forces between two point charges, forces between multiple charges; superposition principle and continuous charge distribution. Electric field: Electric field due to a point charge, Electric field lines, Electric dipole, Electric field due to a dipole, Torque on a dipole in uniform electric field. Electric flux, Statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside). Electric potential, electric potential due to a point charge, a dipole and system of charges; Equipotential surfaces, Electrical potential energy of a system of two point charges and of electric dipole in an electrostatic field. Conductors and insulators, Dielectrics and electric polarization, capacitor and capacitance, combination of capacitors in series and in parallel, capacitance of parallel plate capacitor with and without dielectric medium between the plates, Energy stored in a capacitor. Van de Graff generator.

**UNIT 12: CURRENT ELECTRICITY****(Marks: 04)**

Electric current, Drift velocity, Ohm's law, Electrical resistance, V-I characteristics (linear & non-linear), Electrical energy and power, Electrical resistivity and conductivity, Carbon resistors, Colour code for carbon resistors; Temperature dependence of resistance. Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel. Kirchhoff's laws and their applications. Wheatstone bridge, Metre bridge. Potentiometer – principle and its application to measure the potential difference and for comparing e.m.f. of two cells; measurement of internal resistance of a cell.

**UNIT 13: MAGNETIC EFFECTS OF CURRENT AND MAGNETISM****(Marks: 05)**

Biot – Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long current carrying straight wire, straight and toroidal solenoids. Force on moving charge in uniform magnetic and electric fields. Cyclotron. Force on a current-carrying conductor in a uniform magnetic field. Force between two parallel current-carrying conductors-definition of ampere. Torque experienced by a current loop in uniform magnetic field; Moving coil galvanometer, its current sensitivity and conversion with examples. Current loop as a magnetic dipole and its magnetic dipole moment, magnetic field lines; Earth's magnetic field and magnetic elements. Para-, dia- and ferro-magnetic substances with examples. Electromagnets and factors affecting their strength, permanent magnets.

**UNIT 14: ELECTROMAGNETIC INDUCTION AND ALT. CURRENTS****(Marks: 04)**

Electromagnetic induction: Faraday's law, induced emf and current; Lenz's Law. Eddy currents. Self and mutual inductance. Alternating currents, peak and rms value of alternating current/voltage; reactance and impedance; LC oscillations (qualitative treatment only) & LCR circuits series, resonance; power in AC circuits, wattless current. AC generators and transformer.

**UNIT 15: ELECTROMAGNETIC WAVES****(Marks: 02)**

Electromagnetic waves and their characteristics. Transverse nature of electromagnetic waves. Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, Xrays, gamma rays) including elementary facts about their uses.

**UNIT 16: OPTICS****(Marks: 07)**

Ray optics-Reflection of light, spherical mirrors, mirror formula, refraction of light-Total internal reflection and its applications, Refraction at spherical surfaces, lenses, thin lens formula, Lens-makers Formula, Magnification, Power of a Lens. Combination of thin lenses in contact, Microscope and Astronomical Telescope (reflecting and refracting) and their magnifying powers. Wave optics: wave front and Huygens' principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proofs of laws of reflection and refraction using Huygen's principle. Interferences, Young's double slit experiment and expression for fringe width, coherent sources and sustained interference of light. Diffraction due to a single slit, width of central maximum. Resolving power of microscopes and astronomical telescopes, Polarisation, plane polarized light; Brewster's law, uses of plane polarized light and Polaroid's.

**UNIT 17: DUAL NATURE OF MATTER AND RADIATION****(Marks: 02)**

Dual nature of radiation. Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation; particle nature of light. Matter waves-wave nature of particle, de Broglie relation. Davission-Germer experiment.

**UNIT 18: ATOMS AND NUCLEI****(Marks: 03)**

Alpha-particle scattering experiment; Rutherford's model of atom; Bohr's model of atom, energy levels, hydrogen spectrum. Composition and size of nucleus, atomic masses, isotopes, isobars; isotones. Radioactivity-alpha, beta and gamma particles/rays and their properties; radioactive decay law. Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number, nuclear fission and fusion.

**UNIT 19: ELECTRONIC DEVICES****(Marks: 04)**

Quantitative ideas on Energy bands in solids, conductors, insulators and semiconductors. Semiconductors; Semiconductor diode: I-V characteristics in forward and reverse bias; diode as a rectifier; I-V characteristics of LED, photodiode, solar cell and Zener diode; Zener diode as a voltage regulator. Junction transistor and its action, characteristics of a transistor; transistor as an amplifier (common emitter configuration) and oscillator. Logic gates (OR, AND, NOT) concept of NAND and NOR gates. Transistor as a switch.

**UNIT 20: COMMUNICATION SYSTEM****(Marks: 02)**

Basic elements of communication system (block diagram only), Bandwidth of signals (speech, TV and digital data); Bandwidth of Transmission medium, Propagation of electromagnetic waves in the atmosphere, sky and space wave propagation. Need for modulation: Production and detection of an amplitude modulated wave.

# **CHEMISTRY**

**UNIT 1: CHEMICAL ARITHMETIC & ATOMIC STRUCTURE****(Marks: 03)**

Laws of chemical combination, Mole concept (numericals) Percentage composition, Chemical reactions, Stoichiometry and calculations based on stoichiometry.

Atomic structure:- Bohr's model of Hydrogen atom, Quantum numbers, Pauli's exclusion principle, Hund's rule and Aufbau principle. Heisenberg's uncertainty principle, de-Broglie wave equation and its significance.

**UNIT 2: CHEMICAL EQUILIBRIUM****(Marks: 04)**

Law of mass action, Le-Chatelier's principle, and its application to physical and chemical equilibria. Ionisation of weak electrolytes (Ostwald's dilution law)

Acids and bases: Acid base equilibria. Bronsted-Lowry and Lewis concept, of acids and bases. Ionic product of water. pH and pOH scales, pK<sub>a</sub> & pK<sub>b</sub> values, Solubility product, Buffer solutions Common ion effect, Hydrolysis of salts

### **UNIT 3: CHEMICAL KINETICS**

**(Marks: 02)**

Rate of chemical reaction, Average and instantaneous rate, Factors effecting rate of reaction, Order and molecularity of reaction, Integrated rate equation and Half-life period (for zero and first order) reaction, Activation energy and Arrhenius equation.

### **UNIT 4: SOLUTIONS**

**(Marks: 02)**

Vapour pressure, Raoult's law, Ideal and Non-ideal solutions, Colligative properties.

Determination of molecular mass of non-volatile solutes through colligative properties.

Abnormal molecular masses and Van't Hoff Factor.

### **UNIT 5: CHEMICAL THERMODYNAMICS**

**(Marks: 04)**

Energy changes taking place during chemical reactions, Internal Energy and Enthalpy changes, Enthalpy of combustion, Solution and Neutralization.

Hess's Law (Numerical problems) Laws of thermodynamics-first, second & third, Concepts of Entropy and Free energy, Spontaneity of a chemical reaction and Thermodynamic equilibrium.

### **UNIT 6: REDOX REACTIONS AND ELECTROCHEMISTRY**

**(Marks: 03)**

Dependence of electrode and cell potential on concentration (Nernst Equation), Electrode potential as a criteria for product formation in electrolysis. E.M.F. of Galvanic cell, Relationship between free energy change and E.M.F. of a cell. Definition and units of Equivalent, Molar and Specific conductivity.

### **UNIT 7: SOLID STATE & STATES OF MATTER**

**(Marks: 04)**

Boyle's Law, Charles's law, Dalton's law of partial pressure, Graham's law of diffusion of gases.

Causes of deviation from ideal behaviour, ideal gas equation and nature of 'R', Vander Waal's equation, surface tension and viscosity of liquids.

Crystalline and amorphous solids, Crystal lattice, Crystal types, Packing efficiency, calculation of density of unit cell, Number of atoms per unit cell in a cubic cell. Co-ordination number, Stoichiometric defects: Schottky, Frenkel and interstitial.

Properties of solids: Electrical, Magnetic & Dielectric.

### **UNIT 8: SURFACE CHEMISTRY**

**(Marks: 02)**

Freundlich Adsorption isotherm, preparation of colloidal solutions by physical and chemical method. Electrical properties (cataphoresis, electroosmosis, coagulation and protective colloids) Homogeneous and Heterogeneous Catalysis.

### **UNIT 9: PERIODIC PROPERTIES**

**(Marks: 02)**

Classification of elements as s, p, d, and f block elements. Variation of Ionization energy, Electron affinity, Electronegativity, Atomic and Ionic radii along the period and down the group in the periodic table.

### **UNIT 10: CHEMICAL BONDING AND MOLECULAR STRUCTURE**

**(Marks: 04)**

Types of chemical bonds, Ionic & covalent bonds, Bond parameters, Quantum theory of covalent bond, pi and sigma bonds, Hybridization involving s, p and d-orbitals, Dipole moments and hydrogen bond.

VSEPR: Shapes of simple molecules (H<sub>2</sub>O, NH<sub>3</sub>, SO<sub>2</sub>, CO<sub>2</sub>, PCl<sub>3</sub>, PCl<sub>5</sub>, ClF<sub>3</sub>, BF<sub>3</sub>, SF<sub>4</sub>, XeF<sub>2</sub>, XeF<sub>4</sub>).

Molecular orbital theory: Energy Levels and M.O. diagrams of H<sub>2</sub>, H<sub>2</sub><sup>+</sup>, He<sub>2</sub>, O<sub>2</sub>, O<sub>2</sub><sup>1-</sup>, O<sub>2</sub><sup>2-</sup> & F<sub>2</sub>.

Bond order and its significance.

### **UNIT 11: CHEMISTRY OF REPRESENTATIVE ELEMENTS**

**(Marks: 04)**

**S and P Block Elements:** Electron configuration, Oxidation states and trends in various properties like ionization energy, electron affinity, atomic radii, electronegativity and diagonal relationship.

**Alkali metals:** Hydration of ions, action with ammonia, flame colouration, solubility of hydroxides, carbonates and sulphates.

**Alkaline Earth Metals:** Solubility of carbonates, hydroxides and sulphates.

**Boron Family:** Structure of halides, relative acid strength of trihalides of boron.

**Carbon family:** Hydrides and oxides.

**Nitrogen family:** Oxides of Nitrogen and Phosphorous, reducing nature, basic strength and boiling points of their halides.

**Oxygen family:** volatility, thermal stability, acid character, reducing character and bond angles of their hydrides, oxyacids of sulphur.

**Halogen family:** Bond energy, colour and oxidizing power, boiling point, acid strength and dipole moment, thermal stability, reducing power of hydrides, relative acidity and oxidizing power of oxyacids of halogens.

#### **UNIT 12: TRANSITION ELEMENTS INCLUDING LANTHANOIDES**

**(Marks: 02)**

Electron configuration, Oxidation states, Colour, and Magnetic properties.

Oxides of Vanadium, Chromium and Manganese Alloys of Copper, Silver and Iron.

Metallurgy of Iron, Copper and Zinc.

#### **UNIT 13: CO-ORDINATION CHEMISTRY**

**(Marks: 04)**

Introduction, Ligands, Co-ordination Number, IUPAC Nomenclature.

Bonding theories: Werner's, VBT and CFT.

Isomerism in Co-ordination compounds (Ionization, Linkage, Hydrate, Geometrical and Optical).

Applications of Co-ordination complexes in Biology, Medicine and Analytical Chemistry.

#### **UNIT 14: NOMENCLATURE AND BASIC CONCEPTS IN ORGANIC CHEMISTRY (Marks: 03)**

Nomenclature of organic compounds (monofunctional and polyfunctional groups), inductive, electromeric resonance and hyperconjugation effects, reaction intermediates, carbocations, carbanions and free radicals with their general stability order, types of organic reactions (addition, substitution, elimination and redox reactions), aromaticity on the basis of Huckel rule. Ortho, meta and para directing groups.

#### **UNIT 15: HYDROCARBONS**

**(Marks: 03)**

Structural isomerism in alkanes, alkenes, alkynes and arenes, stereoisomerism: geometrical and optical isomerism, chirality, origin of chirality, specific rotation, racemisation and resolution, conformations in ethane and cyclohexane, relative configuration (D,L-Nomenclature), absolute (R and S system of nomenclature).

#### **UNIT 16: ORGANIC CHEMISTRY BASED ON FUNCTIONAL GROUP-I**

**(Marks: 02)**

Haloalkanes, haloarenes, alcohols and phenols: General methods of preparation and properties. Chloroform and Iodoform.

#### **UNIT 17: ORGANIC CHEMISTRY BASED ON FUNCTION GROUP-II**

**(Marks: 03)**

Ethers, Aldehydes, Ketones, Monocarboxylic acids: General methods of preparation and properties. Derivatives of monocarboxylic acids like acid halides, acid anhydrides acid amides and esters.

Relative strength of carboxylic acids

#### **UNIT 18: ORGANIC CHEMISTRY BASED ON FUNCTIONAL GROUP-III**

**(Marks: 03)**

Cyanides, Isocyanides, Nitrocompounds and Amines: General methods of preparation and properties. Relative basic character of amines.

#### **UNIT 19: MOLECULES OF LIFE**

**(Marks: 03)**

Carbohydrates: Definition, Classification, Mutarotation, Structure of Amino-acids, Peptides and Proteins (Molish and ninhydrin tests). Classification and uses of vitamins. Chemicals in medicine and health care, Dyes and drugs. Chemical reactions in atmosphere, ozone depletion and its effects. Acid rain, Green House effect & Global warming.

#### **UNIT 20: POLYMERS**

**(Marks: 03)**

Introduction, Classification, Methods of Polymerisation (Addition, Condensation, Free Radical, Cationic & Anionic).

Natural & Synthetic Polymers: Polythene, Nylon, Polyester, Bakelite and Rubber.

Biodegradable and Non-Biodegradable Polymers.

# MATHEMATICS

## UNIT 1: SETS, RELATIONS AND FUNCTIONS

(Marks: 06)

**Sets** and their representation, finite and infinite sets, empty set subsets, subset of real numbers especially intervals, power set, universal set. Venn diagram, union and intersection of sets. Difference of sets, Compliment of a set. Ordered pairs, Cartesian product of sets, number of elements in the Cartesian product of two finite sets.

**Relations**, Domain, co- domain and range of relation, types of relations, reflexive, symmetric, transitive and equivalence relations.

**Functions** as special kind of relations from one set to another, domain, co-domain and range of a function. One to one, onto functions. Real valued functions of the real variable; constant, identity, polynomial, rational, modulus, signum and the greatest integer functions with their graphs. Sum, difference, product and quotients of functions. Composition of functions, inverse of a function, binary operations.

## UNIT 2: COMPLEX NUMBER; LINEAR INEQUATION; LINEAR PROGRAMMING (Marks: 06)

**Complex number**: Conjugate of a complex number, modulus and amplitude (argument) of a complex number, Argand's plane and polar representation of complex numbers, algebraic properties of complex numbers. Fundamental theorem of algebra, solution of Quadratic equation in the complex number system. Square root of a complex number.

**Linear inequation**: Algebraic solution of linear inequalities in one variable and two variables.

**Linear programming**: Introduction, definition of related terminology such as constraints, objective function, optimization, different type of linear programming problem (L.P), mathematical formulation of L.P problem, graphical method of solution for problems in two variables, feasible and infeasible regions, feasible and infeasible solutions, optimal feasible solutions.

## UNIT 3: SEQUENCE AND SERIES, PERMUTATION AND COMBINATION & BINOMIAL THEOREM (Marks: 06)

**Sequence and series**: Arithmetic progression (A.P), arithmetic mean (A.M), nth term, sum to n-terms of an A.P, Geometric progression (G.P), Geometric Mean (G.M), nth term, sum to n-terms and sum to infinity of a G.P. Relation between A.M and G.M. Sum to n terms of  $\sum n$ ,  $\sum n^2$  and  $\sum n^3$ .

**Permutation and combination**: Fundamental principle of counting, factorial n, permutations  $P(n,r)$  and combinations  $C(n,r)$ , simple applications.

**Binomial Theorem**: Binomial theorem for positive integral power. general and middle terms in the Binomial expansion. Pascal's triangle and simple applications.

## UNIT 4: TRIGONOMETRIC AND INVERSE TRIGONOMETRY FUNCTIONS (Marks: 06)

Positive and negative angles, measuring angles in radians and in degrees, Conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Periodicity of Trigonometric functions. Basic Trigonometric identities  $\sin^2 x + \cos^2 x = 1$  for all Sign of  $x$  etc. Trigonometric functions and their graphs. Expressions for  $\sin(x \pm y)$ ,  $\cos(x \pm y)$ ,  $\tan(x \pm y)$ ,  $\cot(x \pm y)$ , sum and product formulae.

Identities related to  $\sin 2x$ ,  $\cos 2x$ ,  $\tan 2x$ ,  $\sin 3x$ ,  $\cos 3x$ , and  $\tan 3x$ . General and principal solutions of trigonometric equations of the type  $\sin x = \sin a$ ,  $\cos x = \cos a$ ,  $\tan x = \tan a$ .

**Inverse trigonometric functions**, range, domain, principal value branches. Graphs of inverse trigonometric functions, elementary properties of inverse trigonometric functions

## UNIT 5: MATRICES AND DETERMINANTS

(Marks: 04)

**Matrices**, concepts, notation, order, equality, types of matrices, Zero matrix, transpose of matrix, Symmetric and skew symmetric matrices. Addition, multiplication, scalar multiplication of matrices, simple properties of addition, multiplication and scalar multiplication of matrices. Non-commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (order  $2 \times 2$ ). Concept of elementary row and column operation, Invertible matrices and uniqueness of inverse, if it exists. (Matrices with real entries).

**Determinants** of square matrix (upto  $3 \times 3$  matrices) properties of determinants, minors, cofactors and applications of determinants in finding area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number

of solutions of system of linear equations by examples, solving system of linear equations in two or three variables using inverse of a matrix.

## UNIT 6: LIMIT, CONTINUITY AND DIFFERENTIATION

(Marks: 08)

Concept of limit of a function. Theorems on Limits, Evaluation of limits using standard results

$$\lim_{x \rightarrow 0} \frac{\sin x}{x}, \lim_{x \rightarrow a} \frac{x^n - a^n}{x - a}, \lim_{x \rightarrow 0} \frac{1}{x}, \lim_{x \rightarrow \infty} \frac{1}{x}, \lim_{x \rightarrow \infty} \left(1 + \frac{1}{x}\right)^x$$

$$\lim_{x \rightarrow 0} (1 + x)^{1/x}, \lim_{x \rightarrow 0} \frac{\log(1 + x)}{x}, \lim_{x \rightarrow 0} \frac{e^x - 1}{x},$$

**Continuity** of a function at a point. Continuity of Sum, product and quotient of functions. **Derivative:** definition of a derivative of a function, geometrical interpretation of the derivative.

- Derivative of sum, difference, product and quotient of two or more functions.
- Derivative of algebraic and composite functions.
- Derivative of trigonometric and inverse trigonometric functions.
- Chain rule, derivative of implicit functions.
- Derivative of logarithmic and exponential functions.
- Logarithmic differentiation.
- Derivative of functions expressed in parametric forms.

Second order derivatives.

- Rolle's and Lagrange's Mean Value Theorem and their geometrical interpretation and their simple applications.

**Application of Derivative:** rate of change, increasing and decreasing functions, tangents and normals, approximation, maxima and minima (first derivative and second derivative test). Simple problems.

## UNIT 7: INTEGRATION AND DIFFERENTIAL EQUATIONS

(Marks: 07)

Integration as inverse process of differentiation. Integration of variety of functions by Substitution, by parts, by partial fractions. Simple integrals of the type:

$$\int \frac{dx}{x^2 \pm a^2}, \int \frac{dx}{\sqrt{x^2 \pm a^2}}, \int \frac{dx}{\sqrt{a^2 - x^2}},$$

$$\int \frac{dx}{ax^2 + bx + c}, \int \frac{dx}{\sqrt{ax^2 + bx + c}}, \int \frac{(px + q)}{ax^2 + bx + c} dx, \int \frac{(px + q)}{\sqrt{ax^2 + bx + c}} dx,$$

$$\int \sqrt{a^2 \pm x^2} \cdot dx, \int \sqrt{x^2 - a^2} \cdot dx,$$

$$\int \sqrt{ax^2 + bx + c} dx, \int \frac{dx}{a + b \cos x}, \int \frac{dx}{a + b \sin x},$$

$$\int (px + q)\sqrt{ax^2 + bx + c} dx$$

Definite integrals as a Limit of a sum. Fundamental Theorem of calculus. Basic properties of definite integrals Evaluation of definite integrals.

**Application of integrals:** Application in finding the area under simple curves, especially lines. Areas of circles, parabolas and ellipses (in standard form) Area under the curve  $y = \sin x$ ,  $y = \cos x$ , area between the above two curves.

**Differential Equations:** Definition, order and degree of a differential equation. General and particular solutions of a differential equation. Formation of a differential equation whose general solution is given. Solution of differentiation equation by method of separation of variables. Solution of Homogeneous differential equation of first order and first degree. Solution of linear differential equation of the type:

$$\frac{dy}{dx} + py = q, \text{ where } p \text{ and } q \text{ are functions of } x \text{ alone and}$$

$\frac{dx}{dy} + px = q$ , where  $p$  and  $q$  are functions of  $y$  alone.

## **UNIT 8: STRAIGHT LINES AND CONIC SECTIONS**

**(Marks: 05)**

Distance between two points, section, slope of a line, angle between two lines, various forms of equations of lines, point-slope form, intercept form, two point form, and normal form. General equation of a line, distance of a point from a line. Conic Section: Sections of a cone, circles, parabola, ellipse, hyperbola, a point, a straight line and a pair of intersecting lines as a degenerated case of conic section. Standard equation of a circle, parabola, ellipse, and hyperbola and their simple properties.

## **UNIT 9: STATISTICS AND PROBABILITY**

**(Marks: 06)**

**STATISTICS** Measure of dispersion, mean, deviation, variance and standard deviation of ungrouped/ grouped data. Analysis of frequency distribution with equal means but different variances.

**PROBABILITY** : Random Experiment: outcome, sample spaces.

Events: Mutually exclusive and exhaustive events. Axiomatic (set theoretic) probability, probability of an event, probability of “Not” and “Or” events. Multiplication theorem on probability, conditional probability, independent events, total probability, Baye’s theorem, random variable and its probability, distribution, mean and variance of a random variable. Repeated independent (Bernoulli) trials and Binomial distribution.

## **UNIT 10: VECTORS AND THREE DIMENSIONAL GEOMETRY**

**(Marks: 06)**

Vectors and scalars, magnitude and direction of a vector Direction Cosines and ratios of a vector. Types of vector, equal, zero, unit, parallel and collinear vectors. Position vector of a point, negative of a vector, components of a vector, addition of vectors, Scalar multiplication, position vector of a point dividing a line segment in a given ratio. Scalar (dot) product of vectors, projection of a vector on a line. Vector (cross) product of vectors, Scalar triple product. Coordinate axes and Coordinate planes in three dimensions of a point, distance between two points and sectional formula.

**STRAIGHT LINES AND SPACE** Direction cosines and direction ratios of a line joining two points. Cartesian and vector equation of a line ( in various forms), coplanar and skew-lines, shortest distance between two lines.

**PLANES** Cartesian and vector equation of a plane( in various forms). Distance of a point from a plane.

Angle between:

- i. Two lines
- ii. Two planes.
- iii. A line and a plane

## 15. INSTITUTIONS WITH COURSES AND TENTATIVE INTAKE CAPACITY:



### GOVT. COLLEGE OF ENGINEERING & TECHNOLOGY, JAMMU

Phone: 0191-2546244, 2544863

Fax: 0191-2560359

Email: [principal@gcetjammu.org](mailto:principal@gcetjammu.org)

| Courses    | Intake Capacity | 5% seats for TFW*<br>candidates | Seats to be filled<br>by BOPEE |
|------------|-----------------|---------------------------------|--------------------------------|
| Civil      | 60              | 3                               | 63                             |
| E & C      | 60              | 3                               | 63                             |
| Computer   | 60              | 3                               | 63                             |
| Electrical | 60              | 3                               | 63                             |
| Mechanical | 60              | 3                               | 63                             |
| Total      | 300             | 15                              | 315                            |

\* TFW means Tuition Fee Waiver. A candidate whose father's annual income from all sources is less than 4,50,000 (Four lakhs and fifty thousand) is entitled to get this certificate.



## MODEL INSTITUTE OF ENGG.& TECH. KOT BAHLWAL, JAMMU

Phone: 0191-2623116, 2623180

Email: [principal@mietjammu.in](mailto:principal@mietjammu.in)

Fax: 0191-2623181

Website: [www.mietjammu.in](http://www.mietjammu.in)

| Courses           | Intake Capacity* | Seats to be filled by BOPEE   |                  | Management Quota Seats |
|-------------------|------------------|-------------------------------|------------------|------------------------|
|                   |                  | 5% seats for TFW** candidates | Open Merit Seats |                        |
| <b>CIVIL**</b>    | 60               | 3                             | 57               | 3                      |
| <b>E &amp; C</b>  | 120              | 6                             | 114              | 6                      |
| <b>Computer</b>   | 120              | 6                             | 114              | 6                      |
| <b>Electrical</b> | 60               | 3                             | 57               | 3                      |
| <b>I.T</b>        | 60               | 3                             | 57               | 3                      |
| <b>Total</b>      | 420              | 21                            | 399              | 21                     |

\*Subject Approval from J&K Government, Jammu University and AICTE.

\*\*TFW means Tuition Fee Waiver. A candidate whose father's annual income from all sources is less than 4,50,000 (Four lakhs and fifty thousand) is entitled to get this certificate.



## MBS COLLEGE OF ENGINEERING & TECHNOLOGY, JAMMU

Phone: 0191-2216625

Fax: 0191-2262896

Email: [sushilbadyal@yahoo.com](mailto:sushilbadyal@yahoo.com)

| Courses           | Intake Capacity* | Seats to be filled by BOPEE   |                  | Minority Quota Seats |
|-------------------|------------------|-------------------------------|------------------|----------------------|
|                   |                  | 5% seats for TFW** Candidates | Open Merit Seats |                      |
| <b>E &amp; C</b>  | 60               | 1.5                           | 30               | 30                   |
| <b>Mechanical</b> | 60               | 1.5                           | 30               | 30                   |
| <b>Computer</b>   | 60               | 1.5                           | 30               | 30                   |
| <b>Electrical</b> | 60               | 1.5                           | 30               | 30                   |
| <b>I.T</b>        | 60               | 1.5                           | 30               | 30                   |
| <b>Total</b>      | 300              | 7.5                           | 150              | 150                  |

\*Subject Approval of the regulatory bodies, AICTE, state Government and University of Jammu.

\*\*TFW means Tuition Fee Waiver. A candidate whose father's annual income from all sources is less than 4,50,000 (Four lakhs and fifty thousand) is entitled to get this certificate



## SSM COLLEGE OF ENGINEERING, SRINAGAR

Phone: 0194-2496260

Fax: 0194-2496135

Email: [ssmkashmir@gmail.com](mailto:ssmkashmir@gmail.com)

Website: [www.ssmcollegeofengineering.com](http://www.ssmcollegeofengineering.com)

| Courses      | Intake Capacity* | Seats to be filled by BOPEE   |                  | Management Quota Seats |
|--------------|------------------|-------------------------------|------------------|------------------------|
|              |                  | 5% Seats for TFW** Candidates | Open Merit Seats |                        |
| Civil        | 180              | 9                             | 171              | 9                      |
| Mechanical   | 120              | 6                             | 114              | 6                      |
| E & C        | 180              | 9                             | 171              | 9                      |
| Computer     | 120              | 6                             | 114              | 6                      |
| Electrical   | 120              | 6                             | 114              | 6                      |
| <b>Total</b> | <b>720</b>       | <b>36</b>                     | <b>684</b>       | <b>36</b>              |

\*Subject Approval of the regulatory bodies, AICTE, State Government and University of Kashmir.

\*\*TFW means Tuition Fee Waiver. A candidate whose father's annual income from all sources is less than 4,50,000 (Four lakhs and fifty thousand) is entitled to get this certificate.



## Yogananda College of Engineering and Technology, Jammu\*\*

Phone: 0191-2605601, 2605602, 2605603

Fax: 0191-2605604

Email: [JAMWALGROUP94@gmail.com](mailto:JAMWALGROUP94@gmail.com)

| Courses      | Intake Capacity | Seats to be filled by BOPEE  |                  | Management Quota Seats |
|--------------|-----------------|------------------------------|------------------|------------------------|
|              |                 | 5% Seats for TFW* Candidates | Open Merit Seats |                        |
| Civil        | 120             | 6                            | 114              | 6                      |
| Mechanical   | 120             | 6                            | 114              | 6                      |
| IT           | 60              | 3                            | 57               | 3                      |
| Computer     | 60              | 3                            | 57               | 3                      |
| Electrical   | 60              | 3                            | 57               | 3                      |
| <b>Total</b> | <b>420</b>      | <b>21</b>                    | <b>399</b>       | <b>21</b>              |

\*Subject to approval of the regulatory bodies. AICTE, State Government and University of Jammu

\*\*TFW means Tuition Fee Waiver. A candidate whose father's annual income from all sources is less than 4,50,000 (Four lakhs and fifty thousand) is entitled to get this certificate.



### Bhargava College of Engineering & Technology Supwal (Samba) J&K

Mobile No: 9419183499, 9419152952

Fax: 01923-246169

Email: [MD@bhargavaengineeringcollege.in/sanjeevsharma0500@gmail.com](mailto:MD@bhargavaengineeringcollege.in/sanjeevsharma0500@gmail.com)

Website: [www.bhargavaengineeringcollege.in](http://www.bhargavaengineeringcollege.in)

| Courses          | Intake Capacity | Seats to be filled by BOPEE  |                  | Management Quota Seats |
|------------------|-----------------|------------------------------|------------------|------------------------|
|                  |                 | 5% Seats for TFW* Candidates | Open Merit Seats |                        |
| Civil Engg.      | 60              | 3                            | 57               | 3                      |
| Mechanical Engg. | 60              | 3                            | 57               | 3                      |
| Computer Engg.   | 60              | 3                            | 57               | 3                      |
| Electrical Engg. | 60              | 3                            | 57               | 3                      |
| E&C Engg.        | 60              | 3                            | 57               | 3                      |
| <b>Total</b>     | <b>300</b>      | <b>15</b>                    | <b>285</b>       | <b>15</b>              |

\*Subject to approval of the regulatory bodies. AICTE, State Government and University of Jammu

\*\* TFW means Tuition Fee Waiver. A candidate whose father's annual income from all sources is less than 4,50,000 (Four lakhs and fifty thousand) is entitled to get this certificate.

## 16. ANNEXURES

### ANNEXURE-I

#### COMPETENT AUTHORITIES FOR ISSUANCE OF RESERVED CATEGORY CERTIFICATES

| S. No. | Categories                                                                                                                                                                                                                           | Competent Authorities to issue certificates                                                                 |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1      | Scheduled Caste (SC)                                                                                                                                                                                                                 | Revenue Officer not below the rank of Tehsildar *                                                           |
| 2      | <b>Scheduled Tribes</b>                                                                                                                                                                                                              |                                                                                                             |
|        | i. Scheduled Tribe, Gujjar & Bakerwal (STGB)                                                                                                                                                                                         |                                                                                                             |
|        | ii. Scheduled Tribe, Leh District (STL)                                                                                                                                                                                              |                                                                                                             |
|        | iii. Scheduled Tribe, Kargil District (STK)                                                                                                                                                                                          |                                                                                                             |
|        | iv. Other Scheduled Tribes (STO)                                                                                                                                                                                                     |                                                                                                             |
| 3      | <b>Socially and Educationally Backward Classes</b>                                                                                                                                                                                   |                                                                                                             |
|        | i. Weak and Under Privileged Classes, Social Castes (OSC)                                                                                                                                                                            |                                                                                                             |
|        | ii. Residents of Backward Area (RBA)                                                                                                                                                                                                 |                                                                                                             |
|        | iii. Residents of Area Adjoining Actual Line of Control (ALC)                                                                                                                                                                        |                                                                                                             |
| 4      | Candidates hailing from poor and Backward families whose annual income does not exceed Rs. 70,000/- BAMS/ Physiotherapy and BUMS in private colleges                                                                                 | Commanding Officer of the concerned Unit                                                                    |
| 5      | Children of Defense Personnel. (CDP) (Navy, Army and Air force only) **<br>Ex-servicemen <b>Zila Sainik Welfare officer</b>                                                                                                          |                                                                                                             |
| 6      | Children of Permanent Residents of Paramilitary Forces and State Police Personnel serving in the State (JKPM)                                                                                                                        | DIG Concerned                                                                                               |
| 7      | Candidates possessing outstanding proficiency in Sports (SP) ***                                                                                                                                                                     | Secretary, J&K Sports Council<br>(to be submitted to Council by or before the last date fixed by the BOPEE) |
| 8      | Tuition Fee Waiver Certificate (TFW)<br>Any candidate whose parent's income from all sources is less than rupees 4,50,000 (Four Lakhs and fifty thousand only) can get this certificate.<br>(Applicable to only Engineering Courses) | Tehsildar of the concerned Tehsil                                                                           |

## ANNEXURE-II

### INCOME CERTIFICATE FOR TUITION FEE WAIVER

GOVERNMENT OF JAMMU AND KASHMIR

INCOME CERTIFICATE

OFFICE OF THE TEHSILDAR \_\_\_\_\_

**Sub:- Issuance of income certificate in favour of**

\_\_\_\_\_  
S/o.F/o.M/o. \_\_\_\_\_ R/o \_\_\_\_\_

As verified by Naib Tehsildar Circle \_\_\_\_\_ vide his office letter no. \_\_\_\_\_ Dated \_\_\_\_\_ and also by field agency(s), this is to certify that monthly income of Shri \_\_\_\_\_  
S/o.F/o.M/o. \_\_\_\_\_  
R/o \_\_\_\_\_  
from all sources is Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_  
\_\_\_\_\_) Per Month including Agriculture/Horticulture/rental shops/houses etc. and his family consists of \_\_\_\_\_ members.

Family details are as under:-

| S.No | Name | Relation | Age | Occupation | Monthly Income | Income from Land and other immovable assets | Annual Income |
|------|------|----------|-----|------------|----------------|---------------------------------------------|---------------|
| 1    |      |          |     |            |                |                                             |               |
| 2    |      |          |     |            |                |                                             |               |
| 3    |      |          |     |            |                |                                             |               |

Signatures of  
Patwari

Girdawar

N.T. Concerned

**Seal and Signature of Tehsildar**

No. \_\_\_\_\_  
Dated \_\_\_\_\_

## ANNEXURE-III

### SAMPLE of OMR ANSWER SHEET

INSTRUCTIONS: CANDIDATE TO PLEASE FOLD AT PERFORATION AND THEN TEAR AFTER EXAMINATION IS OVER.  
SEPARATE ORIGINAL COPY AND CANDIDATE'S COPY OF OMR ANSWER SHEET AND HAND OVER ORIGINAL ANSWER SHEET TO INVIGILATOR

**ORIGINAL COPY**

**ANSWER SHEET**

Answer Sheet No. \_\_\_\_\_

PHOTOGRAPH

ROLL NO. : \_\_\_\_\_

CANDIDATE'S NAME : \_\_\_\_\_

FATHER'S NAME : \_\_\_\_\_

CATEGORY : \_\_\_\_\_

DATE OF BIRTH : \_\_\_\_\_

**INSTRUCTIONS**

- Do not fold, tear, wrinkle or staple this sheet.
- Use only Blue or Black Ball Point Pen to fill this Answer Sheet.
- Darken only one circle for each question as shown in the example below. Marking should be dark and the circle is to be filled in completely as shown in the example below.

Correct way of marking

I. If your answer is (1) ☒ 1 ☐ 2 ☐ 3 ☐ 4

II. If your answer is (2) ☐ 1 ☒ 2 ☐ 3 ☐ 4

III. If your answer is (3) ☐ 1 ☐ 2 ☒ 3 ☐ 4

IV. If your answer is (4) ☐ 1 ☐ 2 ☐ 3 ☒ 4

Incorrect way of marking

☒ 1 ☒ 2 ☐ 3 ☐ 4

☐ 1 ☒ 2 ☒ 3 ☐ 4

☐ 1 ☐ 2 ☒ 3 ☒ 4

☐ 1 ☐ 2 ☐ 3 ☒ 4

- Mark your answer only in the space provided. Please do not mark any stray mark on this answer sheet.
- Rough work must not be done on this Answer Sheet. Use rough sheets provided at the end of the question booklet for rough work.
- Mark your answer only in the appropriate circle against the corresponding number to the question you are answering.
- Mark your Question Booklet Number and Question Booklet Series correctly.
- There will be 0.2 negative mark for every wrong answer.
- Do not use fluid pens, erasers or blades.
- In case you do not follow the above instructions, your answer sheet is likely to be rejected whenever detected.

**ANSWERS**

|    |   |   |   |   |    |   |   |   |   |
|----|---|---|---|---|----|---|---|---|---|
| 1  | 1 | 2 | 3 | 4 | 41 | 1 | 2 | 3 | 4 |
| 2  | 1 | 2 | 3 | 4 | 42 | 1 | 2 | 3 | 4 |
| 3  | 1 | 2 | 3 | 4 | 43 | 1 | 2 | 3 | 4 |
| 4  | 1 | 2 | 3 | 4 | 44 | 1 | 2 | 3 | 4 |
| 5  | 1 | 2 | 3 | 4 | 45 | 1 | 2 | 3 | 4 |
| 6  | 1 | 2 | 3 | 4 | 46 | 1 | 2 | 3 | 4 |
| 7  | 1 | 2 | 3 | 4 | 47 | 1 | 2 | 3 | 4 |
| 8  | 1 | 2 | 3 | 4 | 48 | 1 | 2 | 3 | 4 |
| 9  | 1 | 2 | 3 | 4 | 49 | 1 | 2 | 3 | 4 |
| 10 | 1 | 2 | 3 | 4 | 50 | 1 | 2 | 3 | 4 |
| 11 | 1 | 2 | 3 | 4 | 51 | 1 | 2 | 3 | 4 |
| 12 | 1 | 2 | 3 | 4 | 52 | 1 | 2 | 3 | 4 |
| 13 | 1 | 2 | 3 | 4 | 53 | 1 | 2 | 3 | 4 |
| 14 | 1 | 2 | 3 | 4 | 54 | 1 | 2 | 3 | 4 |
| 15 | 1 | 2 | 3 | 4 | 55 | 1 | 2 | 3 | 4 |
| 16 | 1 | 2 | 3 | 4 | 56 | 1 | 2 | 3 | 4 |
| 17 | 1 | 2 | 3 | 4 | 57 | 1 | 2 | 3 | 4 |
| 18 | 1 | 2 | 3 | 4 | 58 | 1 | 2 | 3 | 4 |
| 19 | 1 | 2 | 3 | 4 | 59 | 1 | 2 | 3 | 4 |
| 20 | 1 | 2 | 3 | 4 | 60 | 1 | 2 | 3 | 4 |
| 21 | 1 | 2 | 3 | 4 | 61 | 1 | 2 | 3 | 4 |
| 22 | 1 | 2 | 3 | 4 | 62 | 1 | 2 | 3 | 4 |
| 23 | 1 | 2 | 3 | 4 | 63 | 1 | 2 | 3 | 4 |
| 24 | 1 | 2 | 3 | 4 | 64 | 1 | 2 | 3 | 4 |
| 25 | 1 | 2 | 3 | 4 | 65 | 1 | 2 | 3 | 4 |
| 26 | 1 | 2 | 3 | 4 | 66 | 1 | 2 | 3 | 4 |
| 27 | 1 | 2 | 3 | 4 | 67 | 1 | 2 | 3 | 4 |
| 28 | 1 | 2 | 3 | 4 | 68 | 1 | 2 | 3 | 4 |
| 29 | 1 | 2 | 3 | 4 | 69 | 1 | 2 | 3 | 4 |
| 30 | 1 | 2 | 3 | 4 | 70 | 1 | 2 | 3 | 4 |
| 31 | 1 | 2 | 3 | 4 | 71 | 1 | 2 | 3 | 4 |
| 32 | 1 | 2 | 3 | 4 | 72 | 1 | 2 | 3 | 4 |
| 33 | 1 | 2 | 3 | 4 | 73 | 1 | 2 | 3 | 4 |
| 34 | 1 | 2 | 3 | 4 | 74 | 1 | 2 | 3 | 4 |
| 35 | 1 | 2 | 3 | 4 | 75 | 1 | 2 | 3 | 4 |
| 36 | 1 | 2 | 3 | 4 |    |   |   |   |   |
| 37 | 1 | 2 | 3 | 4 |    |   |   |   |   |
| 38 | 1 | 2 | 3 | 4 |    |   |   |   |   |
| 39 | 1 | 2 | 3 | 4 |    |   |   |   |   |
| 40 | 1 | 2 | 3 | 4 |    |   |   |   |   |

Write below as given certification statement in your running handwriting in English:

I certify that I am the person whose Roll Number and Photograph appear on this sheet. The Question Booklet No. and Booklet Series have been correctly filled by me. I have filled the answer sheet myself, signed and put my thumb impression.

\_\_\_\_\_  
SIGNATURE OF THE CANDIDATE

\_\_\_\_\_  
SIGNATURE OF THE INVIGILATOR

NUMBER OF QUESTIONS ATTEMPTED: \_\_\_\_\_

\_\_\_\_\_  
LEFT HAND THUMB IMPRESSION OF THE CANDIDATE

\_\_\_\_\_  
SIGNATURE OF THE SUPERINTENDENT

Invigilator and Superintendent to ensure that the candidate has given correct information regarding No. of Questions attempted, Booklet No. and Series.

## Annexure- IV

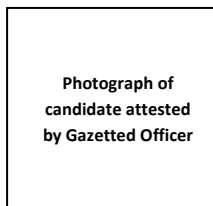
### UNDERTAKING AND AUTHORITY LETTER FOR COUNSELLING

I, \_\_\_\_\_ son/daughter/wife of Mr. \_\_\_\_\_ age \_\_\_\_\_ years \_\_\_\_\_ months, bearing Roll No. \_\_\_\_\_ placed at Rank No. \_\_\_\_\_ in the Entrance Examination for admission to BAMS/BUMS/BPT/BE Course 2017, conducted by BOPEE do hereby solemnly affirm and undertake that the decision of my authorized representative, Mr./Mrs./Miss \_\_\_\_\_ son/daughter/wife of Mr. \_\_\_\_\_ age \_\_\_\_\_ years, regarding selection / rejection of seat on the date of personal appearance shall be binding on me and I shall not have any claim whatsoever, other than the decision taken by my authorized representative on my behalf

on \_\_\_\_\_  
Signature of candidate \_\_\_\_\_  
Name \_\_\_\_\_  
Roll No. \_\_\_\_\_  
Address \_\_\_\_\_

### AUTHORITY LETTER

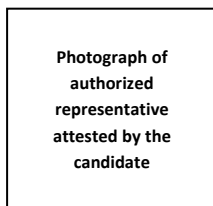
I, \_\_\_\_\_ son/daughter/wife of Mr. \_\_\_\_\_ bearing Roll No. \_\_\_\_\_ for Entrance Examination for admission BAMS/BUMS/BPT/BE Course 2017 do hereby authorise Mr./Mrs./Miss \_\_\_\_\_ son/daughter/wife of Mr. \_\_\_\_\_ R/o \_\_\_\_\_ to represent me on \_\_\_\_\_ (Date) before the committee for allotment of a seat in BAMS/BUMS/BPT/BE Course 2017. The signatures and the photograph of above named Mr./Miss/Mrs. \_\_\_\_\_ are attested below.



Signature of candidate \_\_\_\_\_  
Name \_\_\_\_\_  
Roll No. \_\_\_\_\_  
Address \_\_\_\_\_

Photograph to be Attested by Gazette officer

Address \_\_\_\_\_



Signature of candidate \_\_\_\_\_  
Name \_\_\_\_\_  
Roll No. \_\_\_\_\_  
Address \_\_\_\_\_

Photograph to be attested by the Candidate

## Annexure- V

### UNDERTAKING FOR COUNSELLING

I, \_\_\_\_\_ son/daughter/wife of Mr. \_\_\_\_\_  
age \_\_\_\_\_ years \_\_\_\_\_ months, bearing Roll No. \_\_\_\_\_ placed  
at Rank No. \_\_\_\_\_ in the Entrance Examination for admission to Bachelor of  
Engineering Course 2017, conducted by BOPEE do hereby solemnly affirm and undertake that the decision  
of my authorized representative, Mr./Mrs./Miss \_\_\_\_\_ son/daughter/wife of Mr.  
\_\_\_\_\_ age \_\_\_\_\_ years, regarding selection / rejection of seat on the  
date of personal appearance shall be binding on me and I shall not have any claim whatsoever, other than  
the decision taken by my authorized representative on my behalf

Signature of candidate \_\_\_\_\_

Name \_\_\_\_\_

Roll No. \_\_\_\_\_

Address \_\_\_\_\_

# ANNEXURE-VI

## SAMPLE of COUNSELLING FORM

Counselling Date: \_\_\_\_\_

S. No. 0001

### THE J&K BOARD OF PROFESSIONAL ENTRANCE EXAMINATIONS

#### DISCIPLINE/INSTITUTION PREFERENCE FORMAT FOR CET (PCB/Medical) 1<sup>st</sup> Round of COUNSELLING-2016

Notification No.00-BOPEE of 2016 Dated: 00-00-2016

|                    |  |          |  |
|--------------------|--|----------|--|
| Roll No.           |  | Name     |  |
| Category           |  | Marks    |  |
| Telephone/Cell No. |  | Email ID |  |

| + OPTIONS/PREFERENCE FORMAT FOR ALLOTMENT OF DISCIPLINE/INSTITUTION |                                                                                     |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| S. No.                                                              | Name of the Discipline & Institution opted for admission (In order of preference)   |
| 1                                                                   |                                                                                     |
| 2                                                                   |                                                                                     |
| 3                                                                   |                                                                                     |
| 4                                                                   |                                                                                     |
| 5                                                                   |                                                                                     |
| 6                                                                   |                                                                                     |
| 7                                                                   |                                                                                     |
| 8                                                                   |                                                                                     |
| 9                                                                   |                                                                                     |
| 10                                                                  |                                                                                     |
| 11                                                                  |                                                                                     |
| 12                                                                  |                                                                                     |
| 00                                                                  | MBBS in G.M.C. Srinagar (Sample Preference)-Please write only one choice in one row |

Signature of the Candidate

- a) I accept allotted discipline \_\_\_\_\_ in the Institution \_\_\_\_\_ indicated by me at the Preference No. \_\_\_\_\_ given above. The discipline and institution preference has been exercised by me during the counselling on the basis of merit/rank secured by me in the Common Entrance Test-2016 and the seat available at my turn for allotment on 00-00-2016 at \_\_\_\_\_.
- b) Under Rule 17 of SRO 294, (if applicable), I exercise my option of taking the category seat of my choice i.e. \_\_\_\_\_ in \_\_\_\_\_ instead of my open merit available seat.
- c) I have deposited non refundable counselling fee of Rs. 1000/= in the form payment made using ATM/Debit Card/Credit Card at POS Terminal, vide Receipt No \_\_\_\_\_ dated 00-00-2016.

Signature of the Candidate

Recommended provisionally for admission in Discipline \_\_\_\_\_ at \_\_\_\_\_

Signature of Counselling Committee Members

Approved

Chairman, BOPEE

## ANNEXURE–VII

### Seat Matrix for PCM-2017 IN DIFFERENT DISCIPLINES / INSTITUTIONS

| Discipline                                       | Seats available at GCET |            |           | Seats available at MIET |           | Seats available at MBS |          | Seats available at YCET |           | Seats available at SSM |           | Seats available at BCE&T |           |
|--------------------------------------------------|-------------------------|------------|-----------|-------------------------|-----------|------------------------|----------|-------------------------|-----------|------------------------|-----------|--------------------------|-----------|
|                                                  | OM                      | CAT.       | TFW       | OM                      | TFW       | OM                     | TFW      | OM                      | TFW       | OM                     | TFW       | OM                       | TFW       |
| <b>Civil</b>                                     | 30                      | 30         | 3         | 57                      | 3         | 0                      | 0        | 114                     | 6         | 171                    | 9         | 57                       | 3         |
| <b>E &amp; C</b>                                 | 30                      | 30         | 3         | 114                     | 6         | 30                     | 1.5      | 0                       | 0         | 171                    | 9         | 57                       | 3         |
| <b>Computer</b>                                  | 30                      | 30         | 3         | 114                     | 6         | 30                     | 1.5      | 57                      | 3         | 114                    | 6         | 57                       | 3         |
| <b>Mechanical</b>                                | 30                      | 30         | 3         | 0                       | 0         | 30                     | 1.5      | 114                     | 6         | 114                    | 6         | 57                       | 3         |
| <b>Electrical</b>                                | 30                      | 30         | 3         | 57                      | 3         | 30                     | 1.5      | 57                      | 3         | 114                    | 6         | 57                       | 3         |
| <b>I.T</b>                                       | 0                       | 0          | 0         | 57                      | 3         | 30                     | 1.5      | 57                      | 3         | 0                      | 0         | 0                        | 0         |
| <b>Applied Electronics &amp; Instrumentation</b> | 0                       | 0          | 0         | 0                       | 0         | 30                     | 1.5      | 0                       | 0         | 0                      | 0         | 0                        | 0         |
| <b>Total</b>                                     | <b>150</b>              | <b>150</b> | <b>15</b> | <b>399</b>              | <b>21</b> | <b>180</b>             | <b>9</b> | <b>399</b>              | <b>21</b> | <b>684</b>             | <b>36</b> | <b>285</b>               | <b>15</b> |
| <b>G. Total</b>                                  | <b>2364</b>             |            |           |                         |           |                        |          |                         |           |                        |           |                          |           |

*Note: Subject to approval of regulating bodies.*

#### Allocation of seats as per provisions of JK Reservation Act and Rules at Govt. College of Engineering and Technology, Jammu

| Discipline        | Total No. of Seats Available | OM         | CAT.       | SC        | STGB      | STL      | STK      | STO      | OSC      | RBA       | ALC      | CDP      | SP       | JKPM     |
|-------------------|------------------------------|------------|------------|-----------|-----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|
| <b>Civil</b>      | 60                           | 30         | 30         | 5         | 3         | 1        | 1        | 1        | 1        | 12        | 2        | 2        | 1        | 1        |
| <b>E &amp; C</b>  | 60                           | 30         | 30         | 5         | 4         | 1        | 1        | 0        | 1        | 12        | 2        | 2        | 1        | 1        |
| <b>Mechanical</b> | 60                           | 30         | 30         | 5         | 3         | 1        | 1        | 1        | 2        | 12        | 1        | 3        | 1        | 0        |
| <b>Electrical</b> | 60                           | 30         | 30         | 5         | 4         | 1        | 2        | 0        | 1        | 12        | 2        | 1        | 1        | 1        |
| <b>Computer</b>   | 60                           | 30         | 30         | 4         | 4         | 2        | 1        | 1        | 1        | 12        | 2        | 1        | 2        | 0        |
| <b>Total</b>      | <b>300</b>                   | <b>150</b> | <b>150</b> | <b>24</b> | <b>18</b> | <b>6</b> | <b>6</b> | <b>3</b> | <b>6</b> | <b>60</b> | <b>9</b> | <b>9</b> | <b>6</b> | <b>3</b> |

**Note:** Fractional benefits of .6 each of STO and JKPM have been clubbed together to make it whole number (1 seat) .It has been given to STO and next year( ) it will go to JKPM.

## ANNEXURE–VIII

### Common Entrance Test

## SAMPLE REPRESENTATION REGARDING ANSWER KEY

Name: **T. A. Khan**

Paper: **(PHYSICS)**

Series: **A**

Roll No: **5BOP9999**

Year: **2017**

Series ----

| S. No | QN | Answer Option in the Question Paper | Answer Suggested by the Candidate | Title of the Book  | Author of the Book | Edition | Volume | Page No. | Additional Comments (if Required) |
|-------|----|-------------------------------------|-----------------------------------|--------------------|--------------------|---------|--------|----------|-----------------------------------|
| 1     | 5  | A                                   | C                                 | Conceptual Physics | Paul G. Hewitt     | 4TH ED. | II     | 28       | QUESTION IS INCORRECTLY FRAMED    |
| 2     | 6  | B                                   | D                                 | Do                 | Do                 | do      | do     | do       | QUESTION IS INCORRECTLY FRAMED    |
| 3     |    |                                     |                                   |                    |                    |         |        |          |                                   |
| 4     |    |                                     |                                   |                    |                    |         |        |          |                                   |
| 5     |    |                                     |                                   |                    |                    |         |        |          |                                   |
| 6     |    |                                     |                                   |                    |                    |         |        |          |                                   |

Contact No:

Alternative Contact No

Name and Signature of the Candidate

## **ANNEXURE–IX**

### **Prohibition and Guidelines for Preventing Ragging**

#### **(i) Prohibition**

Carrying of cellphone, pager, calculator or any other electronic gadget to the Entrance Test Centre is strictly prohibited. Neither BOPEE will make any arrangement for the safe custody of any of these items nor will it be responsible for loss of any such item. Hence the candidates are directed not to carry such items with them while going to respective Entrance Test centres for taking the Entrance Test .

#### **(ii) Guidelines**

*The guidelines to curb the menace of ragging in professional colleges issued by the Hon'ble Supreme Court of India.*

1. An annual undertaking signed by each student, whether fresher or senior and his/her parent(s) jointly stating that each of them have read the relevant instructions/regulations against ragging, as well as punishments, and that if the ward has been found guilty he/she shall be proceeded against, shall be prosecuted..
2. Such an undertaking shall be furnished in English as well as vernacular (mother tongue of the parent) at the beginning of each academic year by every student.
3. An undertaking to the similar effect should be obtained every year from each student admitted to the hostel.
4. The compliance to the above effect shall be ensured by each of the affiliating university to which the concerned institution is affiliated and would be verified by them annually.
5. In order to ensure “the ragging free environment” in the campus, each institution shall compulsorily in the prospectus and other admission related documents, shall depict the earlier directions of the Apex Court and/or of the Central or State Governments as applicable, so that candidates and their parents are sensitised for the same.

**ANNEXURE I, Part I**  
**UNDERTAKING BY THE CANDIDATE/STUDENT**

I \_\_\_\_\_ S/o. D/o. of Mr./Mrs./Ms. \_\_\_\_\_

hereby undertake that-

- I will not indulge in any behavior or act that may come under the definition of ragging,
- I will not participate in or abet or propagate ragging in any form,
- I will not hurt anyone physically or psychologically or cause any other harm.

I hereby agree that if found guilty of any aspect of ragging, I may be punished as per Law.

Signed this \_\_\_\_ day of \_\_\_\_\_ month of \_\_\_\_ year

**Signature**

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name:

(1) Witness:

(2) Witness:

**ANNEXURE I, Part II**  
**UNDERTAKING BY PARENT/GUARDIAN**

I \_\_\_\_\_

F/o. M/o. G/o \_\_\_\_\_, I assure you that my son/ daughter/ ward will not indulge in any act of ragging

I hereby agree that if he/she is found guilty of any aspect of ragging, he/she may be punished as per law.

Signed this \_\_\_\_\_ day of \_\_\_\_\_ month of \_\_\_\_\_ Year

**Signature**

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name:

(1)     Witness:

(2)     Witness:

**Annexure X**

**OFFICE OF THE COMMANDING OFFICER OF THE UNIT**

**CERTIFICATE OF BEING CHILD OF DEFENCE PERSONNEL (in-Service)**

This is to certify that Mr./ Miss/Mrs. -----is a son/ daughter of-----  
----- who is serving or has served as a member of Army/ Navy or Air Force.

**Competent Authority**

**With Name and Seal**

ANNEXURE-XI

# OFFICE OF THE ZILA SAINIK BOARD



## Ex-service Men

### CERTIFICATE OF BEING A MEMBER OF DEFENCE PERSONNEL

**SRO-272 DATED 3-7-82/SRO-314 DATED 9-5-85 AS AMENDED VIDE SRO-294 DATED 21-10-05, PARA 2(VIII)**

This is to certify that Mr./Ms. \_\_\_\_\_ Son/Daughter of  
No. \_\_\_\_\_ Rank \_\_\_\_\_ Name \_\_\_\_\_ R/o \_\_\_\_\_  
\_PO \_\_\_\_\_ Tehsil \_\_\_\_\_ District \_\_\_\_\_, who is a  
member of Defence Forces. His/Her ward is beneficiary under the term of SRO-272 dated 3-7-82/SRO-314 dated: 9-5-85 as amended vide SRO-294 dated 21-10-05 being the son/daughter of the defence forces personnel.

It is certified that said Mr./Ms. \_\_\_\_\_ Son/Daughter  
of \_\_\_\_\_ submitted his/her application for grant of this certificate  
on \_\_\_\_\_ and the certificate has been issued to him/her under my seal and signature  
today the \_\_\_\_\_ after the suitable enquiry has been made in this office file  
No. \_\_\_\_\_ dated \_\_\_\_\_.

**Station:**

**Dated:**

**Zila Sainik Welfare Officer.**

---

**ANNEXURE–XII**

**OFFICE OF THE DEPUTY INSPECTOR GENERAL OF POLICE**

**CERTIFICATE OF BEING A CHILD OF PARAMILITARY FORCE/POLICE PERSONNEL (In-service)**

This is to certify that Mr./ Miss/Mrs. -----is a son/ daughter of-----  
-----who is a J&K State Subject and is serving as -----  
----in Para-military Force/Police Force in the state, Mr./Mrs.-----is not rendering  
engineering service or other service of civil nature which would disentitle his/her son/daughter  
from claiming the benefit of being child of Para-military Force/Police Personnel.

It is also certified that son/Daughter of Mr. ----- is entitled to get  
Certificate of being a child of Paramilitary Force/Police Personnel as provided in Rule 2 (ix) of the  
Jammu and Kashmir Reservation Rules, 2005.

**Name, Signature and Office Stamp**

**DIG Concerned**

Space for  
photograph of  
the candidate to  
be duly attested

## **ANNEXURE–XIII**

### **OFFICE OF THE DEPUTY INSPECTOR GENERAL OF POLICE**

#### **CERTIFICATE OF BEING A CHILD OF PARAMILITARY FORCE/POLICE PERSONNEL (Retired)**

This is to certify that Mr./ Miss/Mrs. \_\_\_\_\_ is a son/ daughter of \_\_\_\_\_ who is a J&K State Subject and has died while serving or has served in Para-military Force/Police Force in the state and had been honorably discharged or retired. Mr./Mrs \_\_\_\_\_ was not rendering engineering service or other service of civil nature which would disentitle his/her son/daughter from claiming the benefit of being child of Para-military Force/Police Personnel.

It is also certified that son/Daughter of Mr. \_\_\_\_\_ is entitled to get Certificate of being a child of Paramilitary Force/Police Personnel as provided in Rule 2 (ix) of the Jammu and Kashmir Reservation Rules, 2005.

**Name, Signature and Office Stamp**

**DIG Concerned**

Space for  
photograph of  
the candidate to  
be duly attested

# ATTENTION

Carrying of cellphone, pager, calculator or any other electronic gadget to the examination centre is strictly prohibited. Neither BOPEE will make any arrangement for the safe custody of these items nor will be responsible for loss of any such item. Hence, the candidates are directed not to carry such items with them while going to respective examination centres for taking the entrance examination.

*The guidelines to curb the menace of ragging in professional colleges issued by the Hon'ble Supreme Court of India:*

- An annual undertaking signed by each student, whether fresher or senior and his/her parent(s) jointly stating that each of them has read the relevant instructions/regulations against ragging, as well as punishments, and that if the ward is found guilty, he/she shall be proceeded against and shall be prosecuted.
- Such an undertaking shall be furnished in English as well as vernacular language (mother tongue of the parent) at the beginning of each academic year by every student.
- An undertaking to the similar effect should be obtained every year from each student admitted to the hostel.
- The compliance to the above effect shall be ensured by each of the affiliating university to which the concerned institution is affiliated and would be verified by them annually.
- In order to ensure “the ragging free environment” in the campus, each institution shall compulsorily in their prospectus and other admission related documents, shall depict the earlier directions of the Hon'ble Apex Court and/or of the Central or State Governments as applicable, so that candidates and their parents are sensitised for the same.

**THE JAMMU AND KASHMIR**  
**BOARD OF PROFESSIONAL ENTRANCE EXAMINATIONS**

|           |                                                                                                                                                                                         |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Jammu     | <ul style="list-style-type: none"><li>• 4th Floor, South Block, Bahu Plaza, Jammu - 180012</li><li>• +91 191 - 2470102, +91 191 - 2479371</li></ul>                                     |
| Srinagar  | <ul style="list-style-type: none"><li>• Baghat-i-Barzulla, Opposite J&amp;K Bank, Srinagar - 190005</li><li>• +91 194 - 2433590, +91 194 2437647</li></ul>                              |
| Website   | <ul style="list-style-type: none"><li>• <a href="http://www.jakbopee.org">http://www.jakbopee.org</a></li><li>• <a href="http://www.jakbopee.net">http://www.jakbopee.net</a></li></ul> |
| email     | <ul style="list-style-type: none"><li>• <a href="mailto:helpdeskjakbopee@gmail.com">helpdeskjakbopee@gmail.com</a></li></ul>                                                            |
| Help Desk | <ul style="list-style-type: none"><li>• 9596243215, 9596243216,</li><li>• 9596243217, 9596243218, 9596243219</li></ul>                                                                  |

