

PANJAB UNIVERSITY CHANDIGARH



(Established under the Panjab University Act VII of 1947- Enacted by the Government of India)

PROSPECTUS

PULEET-2017

***ENTRANCE TEST TO BE HELD ON
02-07-2017 (Sunday)***

10:00 a.m. To 11: 30 a.m.

For Admission to:

- University Institute of Engineering & Technology, Panjab University Swami Sarvanand Giri, Regional Centre, Bajwara, Hoshiarpur.
- Chandigarh College of Engineering & Technology, Sector 26, Chandigarh.

**Last date for submission of information on the website
to generate the Bank Challan: 14-06-2017**

Website: <http://puleet.puchd.ac.in>

FEE (Non-refundable):

General Category Rs. 2100/-
SC/ST/PwD Category Rs. 1050/-

Shaan-a-Shauqat

PANJAB UNIVERSITY ANTHEM

तमसो मा ज्योतिर्गमयः
तमसो मा ज्योतिर्गमयः
तमसो मा ज्योतिर्गमयः
तमसो मा ज्योतिर्गमयः
पंजाब विश्वविद्यालय
तेरी शान-ओ-शौकत सदा रहे

मन में तेरा आदर मान
और मोहब्बत सदा रहे
पंजाब विश्वविद्यालय
तेरी शान-ओ-शौकत सदा रहे

तू है अपना भविष्य विधता
पंख बिना परवाज़ सिखाता
जीवन पुस्तक रोज़ पढा कर
सही गलत की समझ बढ़ाता
जीवन पुस्तक रोज़ पढा कर
सही गलत की समझ बढ़ाता
तेरी जय का शंख बजायें
रौशन तारे बन जायें
वखरी तेरी शोहरत
तेरी शोहरत सदा सदा रहे
पंजाब विश्वविद्यालय
तेरी शान-ओ-शौकत सदा रहे
पंजाब विश्वविद्यालय
तेरी शान-ओ-शौकत सदा रहे
तमसो मा ज्योतिर्गमयः
तमसो मा ज्योतिर्गमयः

Tamso Ma Jyotirgamaya
Tamso Ma Jyotirgamaya
Tamso Ma Jyotirgamaya
Tamso Ma Jyotirgamaya
Panjab Vishaw Vidyalyaya
Teri shaan-o-shauqat sada rahe

Mann mein tera aadar maan
Aur mohabbat sada rahe
Panjab Vishaw Vidyalyaya
Teri shaan-o-shauqat sada rahe

Tu hai apna bhavishya vidhata
Pankh bina parwaaz sikhata
Jeevan pustak roz padha kar
Sahi galat ki samajh badhata
Jeevan pustak roz padha kar
Sahi galat ki samajh badhata
Teri jai ka shankh bajayein
Roshan tare ban jaayein
Vakhari teri shohrat
Teri shohrat sada sada rahe
Panjab Vishaw Vidyalyaya
Teri shaan-o-shauqat sada rahe
Panjab Vishaw Vidyalyaya
Teri shaan-o-shauqat sada rahe
Tamso Ma Jyotirgamaya
Tamso Ma Jyotirgamaya

CONTENTS

Activity	Page No.
Schedule for Entrance Test and Admission for PULEET – 2017 / Enquiries regarding admission	04
Important Notes	05
Eligibility / Scheme of Test/ Result/Merit Criteria/ Admission Criteria	06
Information regarding Seats available at CCET, Sector 26, Chandigarh and UIET, PUSSGRC, Hoshiarpur	07-08
Information regarding Seats available at UIET, PUSSGRC, Hoshiarpur	09
PART A	10
Information about CCET, Chandigarh	
CCET Reservation Conditions	11-19
List of Documents required (for CCET Only)	20
PART B	21-22
Information about UIET, PUSSGRC, Hoshiarpur	
List of Documents required for UIET, PUSSGRC, Hoshiarpur	23
Appendix A: Specimen of Certificates	
SUB APPENDIX A1: Schedule Caste Certificate	24
SUB APPENDIX A 2: Gap Year Undertaking (for UIET PUSSGRC, Hoshiarpur)	25
APPENDIX B: Sub-Appendixes for CCET, Sector 26, Chandigarh	
SUB APPENDIX B1: Certificate of Death/ Disablement of Military/ Paramilitary Personnel (For CCET Only)	26
SUB APPENDIX B2: Certificate of Gallantry Award to Military / Paramilitary Personnel (for CCET Only)	27
SUB APPENDIX B3: Certificate of dependence on Military / Defence / Paramilitary Personnel (for CCET only)	28
SUB APPENDIX B4: PwD Certificate	29-30
SUB APPENDIX B 5: Certificate for Children/ Grand children of freedom fighters	31
SUB APPENDIX B6: Proforma of affidavit for Sports Category	32
SUB APPENDIX B 7: Affidavit	33
SUB APPENDIX B8: Gap Year Affidavit	34
SUB APPENDIX B9: Certificate of Caste	35
SUB APPENDIX B10: Undertaking by the candidate / Student	36
SUB APPENDIX B11: Undertaking by the Parent / Guardian	37
General Rules	38-41
Syllabus for PULEET-2017	42-48
Sample Questions	49-50

For any Enquiry

1. Assistant Registrar (C.E.T.)	0172 – 2534829, Mr. Sanjay Kumar 9872414298
2. Controller of Examinations	0172 – 2534811
3. Main Enquiry Office	0172 – 2534818, 2534866, 18001802065, 9779814088

Faculty members are available for consultation and guidance of students from 3:00 P.M to 4:00 P.M on working days.

SCHEDULE FOR ENTRANCE TEST AND ADMISSION PULEET-2017

1	Date of Availability of PULEET Prospectus and Online Entrance Test Form at http://puleet.puchd.ac.in .	16-05-2017 (Tuesday)
2	Last date for submission of information on the website for generation the Bank Challan	14-06-2017 (Wednesday)
3	Last date for deposit of fee in any branch of State Bank of India (SBI) using website generated challan	16-06-2017 (Friday) upto 4:00 p.m.
4	Last date for uploading of photograph, signature with rest of the information on the website	18-06-2017 (Sunday)
5	Final date by which Roll No. will be available online Admit Card will be available for downloading from the website by the candidate using his/her own Login ID and Password provided while generating Bank Challan. The candidates will be communicated through email only for this purpose.	27-06-2017 (Tuesday)
6	Date & time of holding Entrance Test	02-07-2017 (Sunday) 10:00 am to 11:30 am
7	Centre for the Entrance Test	Chandigarh Only
8	Uploading of Answer Key and inviting Objections (through e-mail only)	05-07-2017 (Wednesday) (BY 1:00 P.M.)
9	Last date for submission of objections to the Answer Key	07-07-2017 (Friday) (BY 1:00 P.M.)
10	Date of Declaration of Result	12-07-2017 (Wednesday)
11	Date of availability of Admission Form for CCET, Chandigarh and UIET, PUSSGRC, Hoshiarpur	14-07-2017 (Friday)
12	Submission of hard copy of Admission Form and Scrutiny Form with photocopies of all relevant documents and Rs. 1000/- (One thousand only) (non refundable) as Counselling fees in favour of Chairman Joint Admission, payable at Chandigarh.	By each candidate at the time of reporting for counseling
13	Demand draft of Rs. 45,000/- (Forty five thousand only) as Admission fees in favour of Chairman Joint Admission, payable at Chandigarh, after allotment of seat.	At the time of Counselling-cum-Admission only
14	Venue of Counselling	Old Library Hall, Academic Block I, UIET, Sector 25, P.U. Chandigarh
15	Dates of Counselling	
	1st Counselling	
	Institute	Category
	CCET, Sector 26, Chandigarh & UIET, PUSSGRC, Hoshiarpur	General
		Rank
		1-50
		51-100
		101 to all
		Date
		24.07.2017 (Monday)
		Time
		9:00 a.m. to 11:00 a.m.
		11:00 a.m. to 12 noon
		12:00 noon to 1:00 p.m.
		2: 30 p.m. to 5:00 p.m.
	CCET, Sector 26, Chandigarh & UIET, PUSSGRC, Hoshiarpur	Reserved
		All Eligible Ranks
	2nd Counselling	
	CCET, Sector 26, Chandigarh & UIET, PUSSGRC, Hoshiarpur	General
		Rank
		All Eligible Ranks
		Date
		28.07.2017 (Friday)
		Time
		9:00 a.m. to 11:00 a.m.
		11:00 a.m. to 12 noon
		2:00 p.m. to 5:00 p.m.

* These are the seats which remain unfilled in Reserved Categories and are transferred to General Category as per rule.

Note: Applying for Entrance Test and taking the Test do not entitle a candidate for admission. For admission to PULEET based programme being offered by CCET Sector 26, Chandigarh and UIET, SSGPURC, Hoshiarpur, candidate has to submit Admission Form at the time of counselling on 24.07.2017 (Monday). Admission Form and Scrutiny Form will be available at <http://puleet.puchd.ac.in> on 14.07.2017 (Friday).

IMPORTANT NOTES

1. The Fee for PULEET Entrance Test is Rs. 2100/- (Rs. 1050/- for SC/ST/PwD). The fee for the Entrance Test once paid shall not be refunded.
2. Class B/C Regular Employee of PU must send the copy of printout of their Entrance Test Form along with Performa for claiming 50% concession to P.U. Regular Employees ("B" and "C" Class) duly signed by Head/Chairperson to Assistant Registrar, CET Cell, Aruna Ranjit Chandra Hall, Panjab University, Chandigarh-160014 by registered post/speed post or by hand on or before **22-06-2017 (Thursday)** upto 4:00 p.m.
3. Only the candidates who have passed or are appearing in the qualifying examination for a particular Course can apply for the Entrance Test.
4. The Entrance Test will be of **75 marks** consisting multiple-choice questions, there shall be negative marking for wrong answers i.e. $\frac{1}{4}$ marks will be deducted for wrong answers and for each correct answer 1 mark is to be awarded.
5. Qualifying an Entrance Test does not entitle a candidate to seek admission in a course. The candidate will have to fill up and submit an Admission Form and has to meet the eligibility requirements of the course.
6. The result of the Entrance Test will be available at <http://results.puchd.ac.in>. No separate Result Cards will be issued.
7. The University will publish Merit List of the candidates on the basis of attainment of a minimum of 20% (15% in case of candidates belonging to SC/ST/BC/PwD) of aggregate of maximum marks in the Entrance Test taken as a whole.
8. Candidates securing equal marks shall be bracketed together. Their **inter-se** merit will be determined by the Institution in accordance with the following criteria:
 - (i) A candidate getting higher percentage of marks in the qualifying examination shall rank higher in order of merit.
 - (ii) That if the marks in qualifying examination are also the same then the candidates obtaining more marks in the immediate lower examination, shall rank higher in order of merit.
 - (iii) That if two or more candidates secure equal marks in (i) & (ii) above, candidate senior in age shall rank higher in the order of merit.

Eligibility Conditions, Scheme of Tests, Merit Criteria

Eligibility Conditions

The lateral entry from Diploma to 2nd year of 4-year B.E. degree level will subject to the following conditions:

- (i) The candidate must have passed diploma in Engineering of minimum 3 year duration after Matriculation Examination with Physics and Mathematics, from polytechnic college/institute affiliated with state board of Technical education/University, or recognized by UGC/AICTE. In addition, the candidate must have obtained 60% (55% for SC/ST/BC/PwD) marks as an aggregate in the Diploma Course as required by AICTE.

Or

The candidate must have passed diploma in engineering of minimum 2 year duration after 10 + 2 from Polytechnic college/institute affiliated with state board of technical education/university, or recognized by UGC/AICTE. In addition, the candidate must have obtained 60% (55% for SC/ST/BC/PwD) marks as an aggregate in the Diploma Course as required by AICTE.

- (ii) Candidate must have passed their qualifying examination i.e Diploma in Engineering not earlier than 2015.
- (iii) Admission would be made on the basis of merit obtained in the Entrance Examination to be conducted by the Panjab University, Chandigarh.
- (iv) Candidate having reappear or compartment in diploma in engineering is not eligible for admission in the course even though he/she clears the reappear or compartment by the time of counseling.

Scheme of Test

The duration of the Entrance Test will be one hour and thirty minutes and it will consist of 75 multiple-choice questions of one mark each. The syllabus will be based broadly on the course contents as provided in the Prospectus. There will be negative marking for wrong answers ($\frac{1}{4}$ marks will be deducted).

Merit Criteria

The University will publish Merit List of the candidates for the above course on the basis of attainment of minimum of 20% marks (15% in the case of candidates belonging to Scheduled Castes/Schedules Tribes/ Backward Classes/PwD) of maximum marks in the Entrance Test.

INFORMATION REGARDING SEATS

**Seats available at Chandigarh College of Engineering &
Technology, Sector 26, Chandigarh
Total Sanctioned Intake under LEET: 48 Seats**

(a)	STATE QUOTA (UT CHANDIGARH): All those candidates who have passed their qualifying examination 3 years Diploma with 60% marks (55% marks for SC/ST/PwD) in aggregate but not earlier than 2015 from Technical Institute/ Colleges located in the Union Territory, Chandigarh and recognized by the Chandigarh Administration	41 seats
(b)	ALL INDIA QUOTA: Candidates who have passed their qualifying examination 3 years diploma course with 60% marks (55% marks for SC/ST/PwD) in aggregate but not earlier than 2015 but are not covered under category (a) above.	07 seats

The Branch-wise break-up of the seats (i.e. for 48) is given in the table below:-

Sr.No.	Category	Quota	Computer Science & Engg.	Electronics & Communication Engg.	Civil Engg.	Mechanical Engg.	Total
1	a) Scheduled Caste (15%)	State Quota (UT Chd.)	01	02	01	02	06
		All India Quota	-	-	01	-	01
	b) Scheduled Tribe (5%)	All India Quota	-	-	-	-	-
2	Sons/ Daughters / Spouses of military / Paramilitary Personnel's (5%)	State Quota (UT Chd.)	01	01	-	-	02
		All India Quota	-	-	-	-	-
3	Persons with Disability (PwD) (3%)	State Quota (UT Chd.)	-	-	01	-	01
		All India Quota	-	-	-	-	-
4	Children & Grandchildren of Freedom Fighters (2%)	State Quota (UT Chd.)	-	-	-	01	01
5	Sports Persons (2%)	State Quota (UT Chd.)	01	-	-	-	01
6	Open Seats	State Quota (UT Chd.)	07	07	08	08	30
		All India Quota	02	02	01	01	06
		TOTAL	12	12	12	12	48**

** In addition to above, any seats lying vacant in the second year of Engineering Programmes are also to be filled through Lateral Entry alongwith 48 seats. At present 17 nos. seats are lying vacant due to surrender of seats by 1st year students and these

seats are also to be filled in through PULEET. The stream wise details are as under:-

Stream	Nos. of vacant seats	Seats to filled in from amongst SC/ST Gen. Category candidates				
		Chd. Quota	All India Quota (AIQ)		Chd. Quota (CQ)	All India
		SC	SC	ST	Gen. Category	Gen. Category
CSE	04	01	-	-	01	02
ECE	05	-	01	-	03	01
Civil Engg.	05	-	-	-	05	-
Mech. Engg.	03	-	-	-	01	02
TOTAL	17	01	01	-	10	05

Note 1: The above position of vacant seats is tentative. In case any other seat lying vacant due to surrender till the date of counselling, the same will also be filled in through PULEET alongwith 48 nos. additional seats in four streams.

Note 2: For details instructions with reference to LEET admission, please visit www.ccet.ac.in

Note 3: Candidates seeking admission against any of the reserved seats required to submit a Certificate regarding their category in the prescribed form duly issued and signed by the concerned authority of the State. The admission of candidate against reserved seat will be provisional subject to verification of his/her certificate from the issuing authority. If at any time after enquiry it is proved that the student has got the benefit by misrepresentation of facts or submitting false documents, his / her candidature shall be deemed to have been cancelled.

Note 4: The Institute follows reservation policy of Chandigarh Administration issued from time to time.

Note 5: The Institute follows sports policy of Chandigarh Administration issued from time to time.

Note 6: Seats under AIQ and CQ are not interchangeable.

INFORMATION REGARDING SEATS

**Seats available at University Institute of Engineering & Technology,
PU Regional Centre, Bajwara, Hoshiarpur**

Total Vacant Seats under LEET: 44 Seats

S. No.	Category	ECE	CSE	Mech.	IT
1.	General	11	10	07	13
2.	Scheduled Castes	NIL	01	02	NIL
	TOTAL	11	11	09	13

NOTE: 1. In case any other seat falling vacant due to surrender till the date of counseling, the same will also be filled in through PULEET.

2. For detailed instructions with reference to PULEET admissions, please visit <http://ssgpurch.puchd.ac.in>

3. Candidates seeking admission against any of the reserved seats are required to submit a Certificate regarding their category in the prescribed format mentioned in the Prospectus duly issued and signed by the concerned Authority. The admission of candidate against reserved seat will be provisional, subject to verification of his/her certificate from the issuing authority. If at any time after enquiry it is proved that the student has got the benefit by misrepresentation of facts or submitting false documents, his / her candidature shall be deemed to have been cancelled.

PART –A

CHANDIGARH COLLEGE OF ENGINEERING AND TECHNOLOGY, SECTOR 26, CHANDIGARH

Chandigarh College of Engineering and Technology has the unique distinction of being the College under the administrative control of Chandigarh administration. It is affiliated to Panjab University, Chandigarh. The campus is divided into various functional zones like Academic and Administrative Block, Hostels and Residential complex for faculty and staff. In addition to spacious Virtual Classrooms, Tutorial Rooms and Drawing Halls, the College has an Auditorium, computerized Library with Online E-Journals through INDEST-AICTE consortium, Computer Centre, Cyber Café, Reading Rooms, Workshops, well-equipped Laboratories and Playgrounds.

FEE:

1. A candidate who gets admission in CCET through PULEET-2017 have to deposit Rs. 45,000/-* at the spot on the date of counselling in the shape of demand draft in favour of Chairman Joint Admission, payable at Chandigarh.
2. Hostel Fee (applicable to hostlers only): Rs. 4450/- approximately to be paid (in Cash only) at fee counter in CCET (State Bank of Patiala) on the date of counselling or within Two days.
3. Details of fee which includes Annual Charges, University Charges & Tuition fee are available in the college Prospectus and college website (www.ccet.ac.in). The total fee of CCET is Rs. 36,640/-* (without hostel).

NOTE:

* The above fee is subject to change as per instructions of Chandigarh Administration/ PU from time to time & will be binding.

1. Financial assistance is available for meritorious students belonging to SC/ST categories under a scheme introduced by the Chandigarh Administration.
2. No admission under any quota during the Counselling period will be made if the matter is subjudged in the in the Court of Law.

REFUND RULES

1. The refundable deposits will be fully whenever the student withdraws his admission from the institute.
2. If a student after being granted admission pays the fee but does not register with the institute on the prescribed date, withdraws his admission and applies for refund **before the date of final counselling**, the entire fee paid by him/her shall be refunded except for the non-refundable deposits.
3. A student who withdraws his / her seat after the final counselling for admissions for the year has taken place, will not be entitled to refund of any fee paid by him/her except for the refundable deposits.
4. Refund of fee, in above cases, shall be made after the close of final counselling in applicable cases.

CCET RESERVATION CONDITIONS

1.	<p style="text-align: center;">Sons/ Daughters/ Spouses of military/ Personnel's (5%)</p> <p style="text-align: center;">Spouses of Paramilitary</p>	<p>Paramilitary personnel mean persons serving with Assam Rifles/ Border Security Force/ Central Reserve Police Force/ Central Industrial Security Force/ Indo-Tibetan Border Police Force/ Railway Protection Force/ Secretariat Force/Intelligence Bureau/National Security Guards/Special services Bureau.</p> <p>The ward of a Govt. official serving on deputation with paramilitary forces will not be considered for the benefit of reservation under this category.</p> <p>The admission of the candidates against the reserved seats under this category will be made on the basis of merit list prepared from the following categories of the applicants, in order of preference:</p> <p>(i) Wholly dependent sons/daughters/spouses of military personnel and paramilitary personnel who were killed in action while in service.</p> <p>(ii) Wholly dependent sons/daughters/spouses of military personnel and paramilitary personnel who were disabled, to the extent of 50% or more, in action while in service and boarded out from service.</p> <p>(iii) Wholly dependent sons/daughters/spouses of military and paramilitary personnel who died while in service and whose death was attributable to military service.</p> <p>(iv) Wholly dependent sons/daughters/spouses of military personnel and paramilitary personnel who were disabled, to the extent of 50% or more, while in service and boarded out with disability attributable to military services.</p> <p>(v) Wholly dependent sons/daughters/spouses of military personnel who are awardees of gallantry decorations (in person or posthumously) as given below, in order of preference:</p> <p>a) Param Vir Chakra (PVC)</p> <p>b) Ashok Chakra (AC)</p> <p>c) Sarvottam Yudh Seva Medal (SYSM)</p> <p>d) Maha Vir Chakra (MVC)</p> <p>e) Kirti Chakra (KC)</p> <p>f) Uttam Yudh Seva Medal (UYSM)</p> <p>g) Vir Chakra (VrC)</p>
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		<p>h) Shaurya Chakra (SC)</p> <p>i) President Police Medal for gallantry</p> <p>j) Yudh Seva Medal (YSM)</p> <p>k) Sena/ Nausena/ Vayusena Medal</p> <p>l) Police Medal for gallantry</p> <p>m) Mention-in-Despatches</p> <p>n) Other award winners (does not include service medals)</p> <p>(vi) Sons/Daughters/Spouses of ex-servicemen (military and paramilitary personnel) who are wholly dependent on them must produce discharge Book along with Pension Book.</p> <p>(vii) Sons/Daughters/Spouses of serving military personnel and paramilitary personnel who are wholly dependent on them.</p> <p>Important</p> <ul style="list-style-type: none"> • The candidates claiming admission under category (i)/ (ii) are required to submit a certificate from the respective headquarters regarding death/disablement in action while in service. • The candidates claiming admission under category (iii) and (iv) are required to submit a certificate from the respective headquarters regarding death/disablement while in service, and attributable to military service. • The candidates claiming admission under category (v) are required to submit the photocopy of citation for the gallantry award, failing which the application will not be considered in this category. • The candidates claiming admission under category (vi) are required to submit certificate of discharge from service of the parent/spouse and certificate of dependence on parent/spouse from the competent authority. • The candidates claiming admission under category (vii) are required to submit the certificate of dependence from the unit in which parent/spouse is serving. • Specimens of the required certificates are enclosed herewith (Sub Appendix B1, B2 and B3)
2.	Persons with Disability (PwD) (3%)	Applicants will be considered in this category only if the minimum loss of earning capacity due to handicap is 40%, according to the criteria laid down

		<p>in the standards of E.S.I. Corporation of India. Candidates under PwD category shall produce a certificate of their permanent physical disability from a Civil Surgeon of a District/Director/Principal or a Professor of a Medical College affiliated to University or an institution of national importance provided that the claimant in this category is otherwise capable to pursue the course for which the admission is sought. If this certificate is not attached with the Admission Form, the candidate will not be considered against the seats reserved for this category. The candidate will be called for the Counselling on the basis of the certificate attached with the Admission Form.</p> <p>After provisional admission, the candidate will have to appear before the Medical Board constituted by the Principal Medical Officer, General Hospital, Sector 16, Chandigarh, for determination of the percentage loss of earning capacity through handicap/disability and getting a certificate to this effect. This certificate will also indicate the name of the disease causing the handicap; whether the handicap is progressive or non-progressive; and whether the candidate is able to carry on the studies and perform the duties of an engineer/architect. The final admission will be based on this certificate issued by the Medical Board. In case any candidate does not present himself before the Medical Board on the date intimated to him, his candidature against this category will be rejected and no subsequent opportunity will be given to him.</p> <p>An applicant having a temporary or progressive handicap would not be considered for admission against the seats reserved for this category. Specimen of the required certificate is enclosed herewith (Sub Appendix B4).</p>
3.	Children & Grandchildren of Freedom Fighters (2%)	<p>(i) A grandchild, for the purpose of this reservation, means son's son/daughter, or daughter's son/daughter.</p> <p>(ii) The children/grandchildren of freedom fighters, who have been sanctioned pension by Central/State Govt. or awarded Tamra Patra by Government of India, would be eligible for reservation under this category.</p> <p>(iii) Such candidates are required to produce a certificate, testifying the above criteria, from the Deputy Commissioner of the concerned district. Specimen of the required certificate is enclosed herewith (Sub Appendix B5).</p>
3.	Sports Persons (2%)	<p>Benefit of reservation under this category shall be available only to the category of students, who pass their qualifying examination, as regular students, from Schools/Colleges, recognized by the Chandigarh Administration and situated in the Union Territory of</p>

Chandigarh, and who have studied in Chandigarh Schools/Colleges for at least two years before applying for gradation certificate, subject to the condition that such students must represent Chandigarh State/ Schools etc. in the National/ other recognized tournaments.

(i) The *inter-se* merit of the candidates seeking admission against seats in the reserved category of sports shall be determined only on the basis of their merit in sports as per grading criteria mentioned in the succeeding paragraphs, provided they have qualified in the PULEET-2017.

(ii) Performance in the following sports disciplines only, shall be considered for the purpose of admission against this category, provided that the association/federation holding the tournaments should be affiliated to/recognized by the National Federation of the concerned game:

1	Swimming	2	Archery
3	Athletics	4	Badminton
5	Baseball	6	Basketball
7	Boxing	8	Canoe/Kayak
9	Cricket	10	Cycling Cycling BMX Cycling Road Cycling Track Mountain Bike
11	Fencing	12	Football
13	Golf	14	Gymnastics Artistic Rhythmic Trampoline
15	Handball	16	Hockey
17	Judo	18	Kabaddi
19	Kho-Kho	20	Rowing
21	Shooting	22	Softball
23	Skating/Roller Sports (Sub Jr Upto 14 years, Jr upto 16 years, Seniors above 16 years individual games)	24	Table Tennis
25	Taekwondo	26	Tennis
27	Volleyball	28	Weightlifting
29	Wrestling		

(iii) To avail the benefit of reservation under this category, a candidate must obtain gradation certificate from Director of Sports, Union Territory, Chandigarh, and attach the same with his/her Admission Form. No Admission Form shall be entertained in this category in the absence of gradation certificate.

PROVISIONAL GRADATION CERTIFICATES ARE NOT ACCEPTABLE. NO GRADATION CERTIFICATE SHALL BE ACCEPTED AFTER THE LAST DATE OF RECEIPT OF THE ADMISSION FORM.

(iv) A candidate shall be considered for admission against seats belonging to this category, only if

- a) his/her age falls within the age group which is eligible for participation in Inter-College/ Inter-University tournaments.
- b) his/her achievement in sports relates to his/her activity in any of the three years preceding the year of admission (for admission in the year 2017-2018, the achievements shall not be prior to 1st April, 2014).
- c) Gradation Certificate will not be meant for employment purposes.

(v) The sports gradation certificates shall be in the following descending order of merit.*

***Any fresh guidelines in this regard issued by Chandigarh Administration.**

GRADE 'A'

A sportsperson of international standing i.e. one who has represented India/ donned India colour in one or more of the following International Tournaments/Meets/Championships /competitions etc.

- (i) Olympic Games
- (ii) a) World Cups/Championships/Tournaments in respective games, organized by the International Federation(s) at the highest level.
b) Test Matches/One-day International Matches in Cricket. Grand Slam / Davis Cup in Tennis.
- (iii) Commonwealth Games
- (iv) Asian Game

GRADE 'B'

(a) A sportsperson who has participated in one or more of the following Tournaments/ Competitions/championships etc.

- (i) World Universities/ International tournaments/games other than those mentioned under Grade A" wherein at least 10 teams took part.
- (ii) Asian Federation Cup/ Tournament/Championship/ SAF Games.
- (iii) Asian School Games (at least eight teams took part).
- (iv) Nehru/ Senior National Tournaments as a member of the All India Combined Universities Team.

(v) International Meets/ Championships for Juniors,

		<p>conducted by the concerned International organization.</p> <p>(b) A sportsperson getting any of the first three positions in one or more of the following:</p> <ul style="list-style-type: none"> (i) Recognized National Championships / Inter-State Championships, organized by the National Federations. (ii) All India Inter-Varsity tournaments organized by the AIU. (iii) National School Games organized by the SGFI. (iv) National Championships for Juniors organized by the concerned Federation/ All India Rural Sports Meet organized by the SAI. <p><u>GRADE 'C'</u></p> <p>(a) A sportsperson who has participated in one or more of the following Tournaments/Competitions/ Championships etc. :</p> <ul style="list-style-type: none"> (i) Senior Nationals / Inter-University tournaments / Federation Cup, organized by the Federation/ AIU. (ii) Junior National Championship/ National School games/ KVS National team participated in the National School Games. <p><i>Provided that a sportsperson, who intends to get the benefit of (i) and (ii) above, must have obtained first three positions in the respective State/Inter-College/Inter-School/KVS Nationals.</i></p> <p>(b) A sportsperson getting any of the first three positions in one or more of the following tournaments:</p> <ul style="list-style-type: none"> (i) Recognized Chandigarh State Championships in Seniors provided minimum 7 teams participated. (ii) Panjab University Inter-college Tournaments provided minimum 7 teams participated. (iii) Recognized Chandigarh State Championships for Juniors provided minimum 7 teams participated. (iv) Chandigarh Inter-school tournaments conducted by the Sports Deptt./ KVS National Tournaments for Seniors and Juniors, provided minimum 7 teams participated. <p><u>GRADE 'D'</u></p> <p>A sportsperson who has participated in one or more of the following:</p> <ul style="list-style-type: none"> (i) Senior National Championships/ National Games.
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		<p>(ii) Recognized Junior National Championships.</p> <p>(iii) National School Games.</p> <p>Provided;</p> <ul style="list-style-type: none"> • Gradation will be done in case of sportsperson taking part in the Nationals without obtaining any position in the state. • No gradation for State participation. <p>(vi) Only 'A', 'B', 'C' and 'D' Grade will be awarded by the Chandigarh Administration.</p> <p>In the matter of rating inter-se, preference in the same grade shall be given in the following descending order, namely:</p> <p>(a) Record holders in any event (b) Winners (c) Runners up (d) 3rd position holders (e) Number of times participated (f) Number of disciplines participated.</p> <p>NOTE:</p> <p>1. If there is a tie within the same category, the same shall be resolved by considering the academic merit of the concerned sportspersons in PU-LEET-2017. In case of tie in the academic merit also, the same shall be resolved by considering the seniority in age.</p> <p>2.Regarding Senior and Junior Tournaments/ Championships, Senior shall have precedence over Junior. Further, Junior and School championships will be considered at par.</p> <p>3. Performance shall only be considered for the purpose of admission against this category provided that the Association/ Federation holding the tournament should be affiliated/recognized by the National Federation of the concerned game.</p> <p>(vii) No Sports Gradation shall be issued to the players, who have participated in Mini/Sub-junior (under 15 years of age)/ Open/ Ranking tournament/ Memorial tournaments and individual events.</p> <p>(viii) Only those certificates, issued by the concerned Sports Federations/ Associations shall be entertained, as are duly signed in ink by at least one of the office bearers of the respective Sports Federations/ Associations. The position holders certificate(s) issued by the State Association must have photograph attested by the concerned association with serial number. The Admission Form shall be entertained only when received through an affidavit affirming the authenticity of the claim(s) duly attested by the Magistrate (1st Class) on non-judicial stamp paper worth Rs. 5/- or above.</p>
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	<p>(Sub Appendix B6)</p> <p>(ix) In the context of Individual events/ Team Games, position achieved will be considered only if it has been achieved through a competition with seven or more competitors/ at least seven units, i.e. for State, Senior, Junior/ Inter-College.</p> <p>(a) International Tournaments for Senior and Junior organized by the International Federation of that discipline and where at least 10 countries have participated, other than those mentioned against</p> <p>(b) Grade-A. Cricket will be excluded from this.</p> <p>(c) At least 10 States/ Universities for Nationals, i.e. Senior/Junior and All India Inter-Varsity, respectively, shall take part for gradation purposes.</p> <p>(x) The applicants shall be interviewed and may also be given field test(s) in the discipline(s) concerned to ascertain the genuineness of the testimonial(s)/ certificate(s) which they produce in support of their claim(s), to make the grading of the candidate(s) not merely on the basis of the certificate(s) but after due examination and verification.</p> <p>(xi) The Director Sports, Chandigarh Administration, or his nominee, not below the rank of the Joint Director Sports will issue the certificate, and also have the authority to cancel any certificate at any time, if it is found to have been issued on false/incorrect/concealed information or record.</p> <p>(xii) The Committee for screening, interviewing, ascertaining the claim on the basis of physical performance/considering the sports certificate(s), grading shall consist of the following, namely:-</p> <ul style="list-style-type: none"> (i) Director Sports/ Additional Director Sports, UT Chandigarh Chairman (ii) Joint Director Sports, UT Chandigarh Convener (iii) Director Technical Education (or nominee), UT Chandigarh Member (iv) DPI (Colleges) (or nominee), UT Chandigarh Member (v) Eminent Sports personality nominated by Sports Department Member (On yearly rotation basis) (vi) District Sports Officer, UT Chandigarh Member (vii) Coach of the concerned game Member <p>Important:</p> <ul style="list-style-type: none"> • Screening/Trials/Meeting for issuance of Gradation Certificate will be held on quarterly basis. It may be done on monthly basis, if need be, with the prior approval of the competent authority as a special case. • In case of any doubt or clarification about these
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		<p>criteria, the decision of the Secretary Sports, Chandigarh Administration, shall be final.</p> <p>(xiii) The candidate shall give an undertaking (Sub Appendix B7) to the effect that he/she will attend the grounds regularly and will also participate in inter-college and inter-university tournaments when required. His/Her admission will be cancelled if the terms of undertaking thus given, are not adhered to.</p> <p>(xiv) The Principal/Director has the authority to cancel admission at any time if it is found that the candidate obtained such admission on the basis of a false certificate or incorrect statement/record.</p> <p>Note:- Any fresh guidelines in this regard issued by Chandigarh Administration from time to time will be applicable.</p>
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LIST OF DOCUMENTS REQUIRED (FOR CCET ONLY)

1. On the scheduled date of reporting, bring duly filled-in Scrutiny Form (available in PULEET website) and three recent passport size (5 cm x 4 cm) photographs.
2. Bring the original documents and one set of self-attested photocopies of all the documents.
3. Arrange original documents and their self-attested photocopies in the following order:
 - a) PULEET Result card
 - b) Class 10th certificate for Date of Birth
 - c) Character certificate from the Institute last attended.
 - d) Detail Mark Certificates of each semester of Diploma Course.
 - e) Diploma Certificate
 - f) Testimonials w.r.t. computation of Diploma Percentage (If any)
 - g) Equivalence Certificate (if any)
 - h) Migration Certificate
 - i) SC /ST Certificate (wherever applicable) Sub Appendix B9
 - j) Certificate of Death/Disablement of Military/Paramilitary Personnel (wherever applicable) Sub Appendix B1
 - k) Certificate of Gallantry Award to Military/Paramilitary Personnel (wherever applicable) Sub Appendix B2
 - l) Certificate of Dependence on Military/Defence/Paramilitary Personnel (wherever applicable) Sub Appendix B3
 - m) Person with Disability (PwD) Certificate Sub Appendix B4
 - n) Certificate for Children/Grandchildren of Freedom Fighters (wherever applicable) Sub Appendix B5
 - o) Sports Gradation certificate with two affidavits at Sub Appendix B6 and Sub Appendix B7 (wherever applicable)
 - p) Gap Year Affidavit (wherever applicable) Sub Appendix B8
 - q) Undertakings by students and parents at Sub Appendix B10 and Sub Appendix B1
4. At the reporting venue, sign your attendance in the list kept at the Attendance Desk.
5. When called upon, go to the Scrutiny Desk and get your documents scrutinized. Hand over the Scrutiny Form along with self-attested photocopies to the Scrutiny Desk official and collect the Allotment Slip.
6. After the issuance of Allotment Slip, candidate is required to deposit the Bank Draft at the Fee Desk.

PART B

UNIVERSITY INSTITUTE OF ENGINEERING AND TECHNOLOGY (UIET), PUSSGRC, HOSHIARPUR

Keeping with its long tradition of pursuing excellence in teaching and research, Panjab University, Chandigarh established a Regional Centre in the Kandi area of Punjab to cater to the academic needs of the rural students of the region. Earlier known as Swami Sarvanand Giri Regional Centre, this campus was renamed as Panjab University Swami Sarvanand Giri Regional Centre in the year 2011. Spread in picturesque environment near Shivalik foothills, the centre is a landmark donation of infrastructure spread in 10.86 acres of lush green area in the land of saints (Hoshiarpur) by late Dr. Lajpat Rai Munger. The Centre was started with an aim to provide innovation and pre-eminence in the fields of Engineering and Research, conforming to the standards of Panjab University, Chandigarh. This is the largest off-campus establishment of Panjab University having three constituent Institutes namely, University Institute of Engineering and technology (UIET), Department of Computer Science and Applications (DCSA) and University Institute of Legal Studies (UILS).

UIET, Hoshiarpur offers Lateral entry to Engineering programs (self financing) in four branches i.e. Computer Science and Engineering (CSE), Electronics and Communication Engineering (ECE), Information Technology (IT), and Mechanical Engineering (ME). The Institute has well qualified faculty committed to both academics and research. Some of the teachers also own DST/CSIR funded/sponsored research projects. The centre has well equipped infrastructure, self sufficient state-of-the-art laboratories and workshops. The secured campus offers 100% hostel accommodation for both boys and girls with Wi-Fi facility, Health Centre, Cafeteria, 170 Mbps leased line Internet Connectivity, buses for transportation, 24 hours uninterrupted power supply through hotline etc. Apart from academics, UIET also promotes interaction at various levels among the students, the faculty and the experts from industry as well as organizations through National level conferences, symposiums and seminar on regular basis. The department also has a rich collection of library books with latest edition.

The Institute has commendable placement record with students getting placed in reputed companies like Infosys, Infogain, Tech Mahindra, FCS Technologies, Aricent, Cognizant, IBM, HP, L&T and others. The campus has a proud alumni serving at good positions in various renowned organizations in India and abroad. Further, UIET has an MOU with Infosys for Campus Connect Program, Centre Institute of Hand tools, Jalandhar and Industry Institute Partnership with local Industries.

For channelizing the energy of the students, the campus also offers NSS, Gymnasium and all other necessary sports amenities. It also houses an air conditioned auditorium with a seating capacity of more than 300 persons for academic and several cultural activities.

FEE (2017-18)

- 1. A candidate who is offered admission in University Institute of Engineering and Technology, PANJAB UNIVERSITY SSG REGIONAL CENTRE, BAJWARA, HOSHIARPUR is required to pay a total fee of Rs. 80157/-, out of which 1st installment of Rs 45000/- is to be paid on the spot through *Demand Draft* in favor of '*Chairman Joint Admission*,**

Payable at Chandigarh and the balance fee of the Institute is to be deposited in the month of November 2017 as a 2nd installment.

- 2. Besides above Rs 1000/-(one thousand only)(non refundable) is to be paid as counseling fees (on spot) through Demand Draft in favor of 'Chairman Joint Admission, Payable at Chandigarh.**
- 3. In addition to fee, the admitted candidates are also required to deposit a sum of Rs.1000/-(non refundable) in the form of Bank draft/Cash in the favour of "SSGPURC Student Society", payable at Hoshiarpur.**

Note: Refund in case of surrender or withdrawal of seat will be as per rules of Panjab University, Chandigarh

List of Documents Required for UIET PUSSGRC, Hoshiarpur

1. On the scheduled date of reporting, bring duly filled-in Admission Form and Scrutiny Form (available in PULEET website) and three recent passport size (5 cm x 4 cm) photographs.
2. Bring the original documents and one set of self attested photocopies of all the documents.
3. Arrange original documents and their self-attested photocopies in the following order:
 - a) PULEET Result card
 - b) Class 10th Certificate.
 - c) Class 12th Certificate (wherever applicable).
 - d) Character Certificate from the Institute last attended.
 - e) Detail Mark Certificates of each semester of Diploma Course.
 - f) Diploma Certificate
 - g) Testimonials w.r.t. computation of Diploma Percentage (If any)
 - h) Equivalence Certificate (if any)
 - i) Migration Certificate
 - j) SC/ST Certificate (wherever applicable) SUB APPENDIX A1
 - k) Gap Year Undertaking (wherever applicable) SUB APPENDIX A2
4. At the reporting venue, sign your attendance in the list kept at the Attendance Desk.
5. When called upon, go to the Scrutiny Desk and get your documents scrutinized. Hand over the Admission Form & Scrutiny Form along with self-attested photocopies to the Scrutiny Desk official and collect the Allotment Slip.
6. After the issuance of Allotment Slip, candidate is required to deposit the Bank Draft at the Fee Desk.

APPENDIX A
SUB APPENDIX A1

Specimen of Scheduled Caste Certificate
(For UIET, PUSSGRC, Hoshiarpur only)

The Caste/Tribe Certificate should necessarily contain the following information about:

- (a) Name of the person : _____
- (b) Father's name : _____
- (c) Permanent place of residence : _____
- (d) Name of the Caste/ Tribe : _____
- (e) Constitutional order under which the caste/ tribe has been notified
- (f) Signature of issuing authority along with the designation, seals and date

Authorities Empowered to issue SC/ST certificate

1. District Magistrate/ Additional District Magistrate/ Collector/Deputy Commissioner/ Additional Deputy Commissioner/ Deputy Collector/1st Class Stipendiary Magistrate/ Sub-Divisional Magistrate/ Taluka Magistrate/ Executive Magistrate/ Extra Assistant Commissioner.
2. Chief Presidency Magistrate/ Additional Chief Presidency Magistrate/ Presidency Magistrate.
3. Revenue Officer not below the rank of Tehsildar.
4. Sub-Divisional Officer of the area where the candidate and/or his/her family normally resides.
5. Administrator/ Secretary to Administrator/ Development Officer (Lakshdweep Islands)

SUB APPENDIX A2

**(GAP YEAR UNDERTAKING)
(For UIET, PUSSGRC, Hoshiarpur only)**

UNDERTAKING

I _____ son/daughter of _____ Resident
of _____ do hereby declare as under-

- i) That I am seeking admission to the _____ under PULEET-2017.
- ii) That I was engaged in _____ during the gap year i.e. _____.
- iii) That I was not involved in any offence/unlawful activities during the gap year _____.

DATE:

PLACE:

DEPONENT

VERIFICATION

I solemnly declare that the above statement is correct to the best of my knowledge and belief and that nothing has been concealed there in.

DATE:

PLACE:

DEPONENT

SUB APPENDIX B1

**CERTIFICATE OF DEATH/DISABLEMENT OF MILITARY/PARAMILITARY
PERSONNEL
(For CCET only)**

Certified that Mr./Ms. _____, is the son/daughter/spouse of
Shri _____ rank _____. Shri
_____ was killed/disabled to the extent of 50% or more, in
action/not-in- action but otherwise, while being in service, on _____(date). His
death/disability is entirely attributable to military service. Shri
_____ was boarded out of service on _____ (date) with
disability attributable to military service.*

Date

Seal

Signature of Authorized Officer

****Strike out whichever is not applicable***

SUB APPENDIX B2

**CERTIFICATE OF GALLANTRY AWARD TO MILITARY/PARAMILITARY
PERSONNEL (CCET only)**

Certified that Mr./Ms. _____, is the
son/daughter/spouse of Shri _____
rank _____ who was awarded
_____ in the year _____.

(Name of the award)*

Date

Seal

Signature of Authorized Officer

*ParamVir Chakra (PVC), Ashok Chakra (AC), Sarvottam Yudh Seva Medal (SYSM),
MahaVir Chakra (MVC), Kirti Chakra (KC), Uttam Yudh Seva Medal (UYSM), Vir
Chakra (VrC), Shaurya Chakra (SC), President's Police Medal for gallantry, Yudh Seva
Medal (YSM), Sena/ Nausena/ Vayusena Medal, Police Medal for gallantry, Mention in
Despatches, Other award winners

SUB APPENDIX B3

**CERTIFICATE OF DEPENDENCE ON MILITARY/DEFENCE/PARAMILITARY
PERSONNEL
(CCET only)**

Certified that Mr./Ms. _____ is the dependent
son/daughter/spouse of Shri _____ rank _____.

Shri _____ is

- (i) *an ex-serviceman and he retired on _____
- (ii) *currently employed in Unit _____

Date

Seal

Signature of Authorised Officer

Note: (i) The certificate in case of ex-servicemen is to be signed by the Competent Authority.

(ii) The certificate in case of serving personnel is to be signed by the Commandant of the Unit.

****Strike out whichever is not applicable***

SUB APPENDIX B4
(CCET Only)

Person with Disability (PwD) Certificate

NAME & ADDRESS OF THE INSTITUTE/HOSPITAL
Certificate No. _____ Date _____

Affix Passport
size photograph
here

1. This is certified that
Smt/Kum _____
son/wife/daughter of Shri _____ age _____ sex _____
identification mark(s) _____ is suffering from permanent disability of following
category:

A. Locomotor or cerebral palsy:

- BL – Both legs affected but not arms
- BA- Both arms affected Impaired reach Weakness of grip
- BLA – Both legs and both arms affected
- OL-One leg affected (right or left)
 - a. Impaired reach
 - b. Weakness of grip
 - c. Ataxic
- OA –One arm affected
 - a. Impaired reach
 - b. Weakness of grip
 - c. Ataxic

BH-Stiff back and hips (cannot sit or stoop)
MW-Muscular weakness and limited physical endurance.

B. Blindness or Low Vision:

- (i) B-Blind
- (ii) PB-Partially Blind

C. Hearing impairment:

- (i) D-Deaf
- (ii) PD-Partially Deaf

*(Delete the category whichever is not applicable)

2. This condition is progressive/non-progressive/likely to improve/not likely to improve. Re-assessment of this case is not recommended after a period of ___ years _____months.*

3. Sh./Smt./Kum.....meets the following physical requirement for discharge of his/her duties:-

- | | |
|--|--------|
| (i) F-can perform work by manipulating with fingers. | Yes/No |
| (ii) PP-can perform work by pulling and pushing. | Yes/No |
| (iii)L-can perform work by lifting. | Yes/No |
| (iv) KC-can perform work by kneeling and crouching. | Yes/No |
| (v) B-can perform work by bending. | Yes/No |
| (vi) S-can perform work by sitting. | Yes/No |
| (vii) ST-can perform work by standing. | Yes/No |
| (viii) W-can perform work by walking. | Yes/No |

- | | |
|--|--------|
| (ix) SE-can perform work by seeing. | Yes/No |
| (x) H-can perform work by hearing/speaking. | Yes/No |
| (xi) RW-can perform work by reading and writing. | Yes/No |

*Strike out which is not applicable.

Percentage of disability is _____percent.

(Dr. _____)	(Dr. _____)
Regd.No.	Regd. No.
Member	Member

(Dr. _____)
 Regd. No.
 Chairperson Medical Board

Countersigned by the
 Medical Superintendent/CMO
 Head of Hospital (with seal)

Recent attested
 photograph showing
 the disability affixed here

SUB APPENDIX B5

**CERTIFICATE FOR CHILDREN/GRANDCHILDREN OF FREEDOM FIGHTERS
(CCET only)**

Certified that Mr./Ms. _____ son/daughter of
Shri/Mrs. _____, is a child/grandchild of Shri _____,
who is a Tamrapatra Holder/Freedom-Fighter-Pensioner drawing his pension from _____
Treasury.

Date

Seal

Signature of Deputy Commissioner
of the concerned district

****Strike out whichever is not applicable***

SUB APPENDIX B6
(CET Only)

PROFORMA OF AFFIDAVIT FOR SPORTS CATEGORY
(On Non-Judicial Stamp Paper of Rs. 5/- or above duly attested by Notary/Ist/Ind Class
Magistrate)
AFFIDAVIT

I, _____ (name), son/daughter of Shri _____
(father's name), Born on _____ (Date of birth), and are resident
of _____ (address) do hereby solemnly
declare and affirm as under :

1. That as a sportsman/sportswoman in _____
(name of discipline), I have represented the team(s) in the competition(s) on
date(s) and obtained the position(s) as indicated in the table below:

S. No.	Sports Discipline	Team represented	Name of the competition & Year	Venue/ Date	Position secured

2. That the certificates mentioned below are produced by me in support of the above,
are authentic:

- | | |
|-------|--------|
| (i) | (vi) |
| (ii) | (vii) |
| (iii) | (viii) |
| (iv) | (ix) |
| (v) | (x) |

3. I understand that in case the information/documents supplied by me are found
to be false, incorrect or forged, I shall be liable for criminal action in terms of the
provisions contained in the Indian Penal Code.

DATE:

PLACE:

DEPONENT

VERIFICATION

I, the above mentioned deponent, do hereby solemnly declare and affirm
that the above contents are true to the best of my knowledge and belief and nothing
has been concealed therein.

DEPONENT

DATE:

PLACE:

NOTE: In case of a minor, the affidavit shall be filled in by his/her parents/guardians
with suitable amendments.

SUB APPENDIX B7

(CCET Only)

**(To be submitted on non-judicial stamp paper of the value of Rs. 5/- or above,
duly attested by Notary Public/1st Class Magistrate)**

AFFIDAVIT

I,.....son/daughter of shri,
resident of, and admitted to 2nd year B.E. in
Chandigarh College of Engineering & Technology, Chandigarh against a seat reserved for
sportspersons, do hereby declare and affirm as under

That I will attend the play ground regularly and will also participate in inter-college and
inter-university tournaments whenever required. I understand that my admission will be
cancelled if the terms of undertaking for admission to 2nd Year of B.E. Courses, 2017-
2018 are not adhered to by me.

DATE:

PLACE:

DEPONENT

VERIFICATION

I,son/daughter of Shri.....,
hereby solemnly declare that the above statement is true to the best of my knowledge
and belief and nothing has been concealed therein.

DATE:

PLACE:

DEPONENT

**NOTE: In case of a candidate being minor, the affidavit shall be filled in by
his/her parents/guardians with suitable amendments.**

SUB APPENDIX B8

**(GAP YEAR AFFIDAVIT)
(CCET Only)**

(To be submitted on non-judicial stamp paper of the value of Rs. 5/- or above, duly attested by Notary Public/1st Class Magistrate)

AFFIDAVIT

I _____ son/daughter of
_____ Resident of _____ do

hereby declare as under-

- i) That I am seeking admission to the _____ under PULEET-2017.
- ii) That I was engaged in _____ during the gap year i.e. _____.
- iii) That I was not involved in any offence/unlawful activities during the gap year _____.

DATE:

PLACE:

DEPONENT

VERIFICATION

I solemnly declare that the above statement is correct to the best of my knowledge and belief and that nothing has been concealed there in.

DATE:

PLACE:

DEPONENT

SUB APPENDIX B9
(CCET Only)

CERTIFICATE OF CASTE

(To be submitted by Scheduled Castes/Scheduled Tribes candidates only)

Despatch No. _____

Dated _____

Certified that Mr./Ms. _____ son/daughter of
Shri _____, resident of _____, District
_____, State _____ is a member of the Scheduled Castes/Tribes and
belongs to _____ caste/tribe which has been recognized as
a Scheduled Caste/Tribe vide notification No. _____
dated _____ issued by Government of _____
(State).

Name of the
Certifying Officer _____
Designation _____

Date

Signature of the Revenue Officer of the
District concerned, not below the rank
of Tehsildar

Seal

Note: Certificate, if issued by other than mentioned authority, notification of Government must be included.

SUB APPENDIX B10
(CCET Only)

UNDERTAKING BY THE CANDIDATE/STUDENT
(2017-18)

1. I _____ S/o ,D/o of Mr / Mrs/ Ms _____ have carefully read and fully understood the law prohibiting ragging and the directions of the Supreme Court and the Central/State Government in this regard.
2. I have received a copy of the UGC/AICTE Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, (2009) and have carefully gone through it.
3. I hereby undertake that:
 - I will not indulge in any behaviour 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.
4. I hereby agree that if found guilty of any aspect of ragging, I may be punished as per the provision of the UGC/AICTE Regulations mentioned above and/or as per the law in force.
5. I hereby affirm that I have not been expelled or debarred from admission by any Institution.
6. I will not possess/carry any lethal weapon on the College Campus and if any weapon is recovered from me, I be rusticated.
7. I have never been convicted under any criminal offence. No F.I.R. is registered against me and no criminal proceedings are pending against me.

OR

F.I.R./s is/are registered against me & criminal proceedings are pending in the court of _____ at _____. However, I assure the College authority of my good conduct and behaviour as per University admission rules.

Signature:
Name:
Address:

Verification:

That nothing has been concealed in the undertaking & facts mentioned from Sr. No. 1 to 8 are correct & true to the best of my knowledge & belief.

Signature:
Name:
Address:

Dated: _____

Place: _____

SUB APPENDIX B11
(CCET Only)

UNDERTAKING BY THE PARENT/GUARDIAN
(2017-18)

1. I _____ F/o, M/o, G/o _____ have carefully read and fully understood the law prohibiting ragging and the directions of the Supreme Court and the Central/State Government in this regard as well as the UGC/AICTE Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, (2009).
2. I assure you that the my son/daughter/ward will not indulge in any act of ragging.
3. I hereby agree that if he/she is found guilty of any aspect of ragging, he/she may be punished as per the provision of the UGC/AICTE Regulations and/or as per the law in force.

Signed this _____ day of _____ month
of _____ year.

Signature:
Name:
Address:

GENERAL RULES

1. The result of the Entrance Test shall, *ipso facto*, not entitle a candidate to get admission in an college/centre concerned where he/she intends to seek admission. It will be the responsibility of the candidate to make sure about his/her eligibility and fulfillment of such other conditions as may be prescribed for admission in the rules and regulations of college/centre concerned. Merely because a candidate is allowed to appear in the Entrance Test does not mean that he/she is eligible and his/ her appearance therein will not stop or debar the college/centre concerned from satisfying itself about his/her eligibility at any subsequent stage.

Notwithstanding anything contained in this prospectus, the eligibility conditions for admission to any particular course, shall be governed by the respective rules/regulations as enshrined in the P.U. Calendar, volumes I, II and III (latest editions) and / or the general guidelines for admissions/ Handbook of Information-2017 issued by the university and / or decisions of the university senate/ syndicate. In case of any conflict or inconsistency between the prospectus on one hand and the aforesaid Panjab University rules and regulations/ guidelines / Handbook of Information-2017 / decisions of Senate/ Syndicate, on the other, the latter shall prevail.
2. The Entrance Test will be held on **02-07-2017 (Sunday) from 10:00 a.m. to 11:30 a.m.** at **Panjab University, CHANDIGARH** only.
3. Once the candidate has submitted the Online Entrance Test Form, any change in the Form, including category once marked, shall not be allowed.
4. A candidate desirous of taking the Entrance Test should submit his/her fee in any branch of State Bank of India using website generated Challan latest by **16-06-2017 (Friday) upto 4:00 p.m.**
5. Last date for completing the Entrance Form including uploading of photograph, signature with rest of the information on the website is **18-06-2017 (Sunday)**.
6. The fee for the Entrance Test once paid shall not be refunded.
7. **The medium of examination shall be ENGLISH only.**
8. Special arrangements for amanuensis (writer of answer):
A candidate may be allowed help of an amanuensis (writer) if he/she is:
 - (i) Blind
OR
 - (ii) Permanently disabled from writing with his/her own hand.
 - (iii) Temporarily disabled from writing on account of fracture of the right or left arm, forearm or dislocation of a shoulder elbow or wrist etc. The candidate shall produce a certificate from a Professor of the speciality concerned of a Medical College and where there is no Medical College, from the Chief Medical officer of the District concerned to the effect that the candidate is unable to write his/her answer-books because of the temporary disablement.
9. 30 minutes extra would be given to the visually handicapped/persons with disability (PwD).
10. Every candidate is required to hand over both the **OMR Answer Sheet** and the **Question Booklet** to the Centre Superintendent/Invigilator when the time allowed for the Entrance Test is over, even if she/he has not attempted any question. No page/part of the **Question Booklet/ OMR Answer Sheet** is to be removed/ torn/taken out of the Test Centre under any circumstances, failing which the candidate shall be straight disqualified from the Entrance Test.
11. The use of calculators is not allowed.
12. The University will provide logarithmic table. Borrowing or carrying the log table or other such material is not allowed.

13. No candidate shall be allowed to leave the examination hall/room before the expiry of the time allotted for the respective paper.
14. Rough work, if any, is to be done only in the space provided in the **Question Booklet** and nowhere else. No rough work shall be done on the **OMR Answer Sheet** under any circumstances.
15. Any candidate who carries any telecommunication equipment such as pager, cellular phone, wireless set, Bluetooth device, etc. inside the examination hall shall be expelled from the examination hall & disqualified.
16. If any candidate who submits multiple Online Entrance Test Form for the same Course his/her candidature shall be considered only on the basis of one Form.
17. The candidates must bring their own stationary items such as **Black Gel Pen. Borrowing of material inside the Test Centre is strictly prohibited.**
18. **There shall be Negative Marking for Wrong Answers i.e. marks will be deducted for wrong answers.** If for each correct answer 1 mark is to be awarded, for a wrong answer $\frac{1}{4}$ mark will be deducted.
19. **There shall be no re-evaluation/re-checking/re-assessment of answer-sheets under any of the circumstances. Request for seeing the Question Booklet / Answer Sheets by the candidates shall not be entertained at all. The evaluation once done by the University shall be absolutely final.**
20. If a candidate wishes to verify his/her result, he/she will be provided a photocopy of his/her answer sheet on payment of Rs. 10,000/- within 10 days after the declaration of the entrance test result and the office should process the whole procedure within three working days. In case, a discrepancy is found in the result of the candidate, the result would accordingly be revised and the fee deposited will be refunded.
21. In case of Objective Type question papers, the candidate must ensure that the answers to the questions are attempted on the specifically prescribed OMR Answer Sheet only. No answer attempted on the Question Booklet will be considered for evaluation. Only those questions answered on the OMR sheet shall be taken into account.
22. **RESOLVING OF TIES**

Candidates securing equal marks in the Final Merit List shall be bracketed together. However, their inter-se merit rank shall be determined as under:-

 1. A candidate getting higher percentage of marks in qualifying examination (Bachelors degree) shall rank higher in order of merit.
 2. If the marks, as mentioned in (i) are also the same then the candidate obtaining higher percentage of marks in the immediate lower exam shall rank higher in order of merit.
 3. If two or more candidates secure equal marks in (i) and (ii) above, candidate senior in age shall rank higher in order of merit.
23. Candidates are not allowed to carry eatables, drinks etc. into the Test Centre. Smoking inside and around the Centre is not permitted.
24. Any candidate who creates disturbance of any kind during examination or otherwise misbehaves in or around the examination hall or refuses to obey the Superintendent/Deputy Superintendent/Assistant Superintendent /any other official on examination duty or changes his/her seat with any other candidate or occupies any seat, other than the one allotted to him/her shall be expelled from the examination hall. (**“Expulsion” for this purpose would mean cancellation of the Entire Entrance Test**). The Centre Superintendent/Observer/any other authorized University Officer/Official shall be competent to expel a candidate from the examination centre.
25. Any candidate having in his/her possession or accessible to him/her paper/books or notes which may possibly be of any assistance to him/her or is found giving or

- receiving assistance, or copying from any paper/book or note or from anywhere else or allowing any other candidate to copy from his/her answer book or found writing on any other paper, questions set in the question paper, during examination or using or attempting to use any other unfair means or indulging in any kind of misconduct shall be expelled from the examination hall. (**“Expulsion” for this purpose would mean cancellation of the Entire Entrance Test**). The Centre Superintendent/Observer/any other authorized University Officer/Official shall be competent to expel a candidate from the examination centre.
26. If any Answer Sheet of a candidate shows or it is otherwise established that he/she has received or attempted to receive help from any source in any manner or has given help or attempted to give help to any other candidate in any manner, the relevant Answer Sheet shall be cancelled. The cancellation of the Answer Sheet shall mean cancellation of all Answer Sheets of the Common Entrance Test. The decision of the Controller of Examinations, Panjab University, Chandigarh in this regard shall be final.
 27. **If a candidate writes his/her name or puts any kind of identification mark or discloses his/her identity by any method whatsoever on the cover or anywhere else in the Question Booklet/Answer Sheet, the same shall be treated as cancelled. The cancellation of the Answer Sheet shall mean cancellation of all Answer Sheets of the Entrance Test. The decision of the Controller of Examinations, Panjab University, Chandigarh in this regard shall be final.**
 28. Any person, who impersonates a candidate, shall be disqualified from appearing in any Panjab University examination for a period of five years including this Entrance Test, if that person is a student on the rolls of a recognised College or University. But if the person is not on the rolls of a recognised College or University, s/he shall be declared as a person not fit and proper to be admitted to any examination of the Panjab University for a period of 5 years. The case, if necessary, shall also be reported to the police for any further action in the matter.
 29. If it is found that a candidate has knowingly or willfully concealed or suppressed any information/fact which renders him/her ineligible to take the Entrance Test, his/her result of the Test as also admission to a College/Centre of the University, if granted, shall stand cancelled and he/she shall have no claim whatsoever against the College/Centre concerned and the case, if necessary shall be reported to the police.
 30. If a dispute or controversy of any kind arises before, during or after conduct of Entrance Test, the decision of the Controller of Examinations, Panjab University, in all such cases, shall be final.
 31. The candidates shall be admitted to the test only on the production of the Admit Card at the Test Centre. No candidate shall be allowed to take the test without the Admit Card under any circumstances. The candidates must retain the Admit Card with them till the admission process is over, since it will be required again at the time of counseling.
 32. The Admit Cards will be issued to the candidates only provisionally, at their sole risk and responsibility subject to the final confirmation of their eligibility at the time of admission. It is further clarified that the candidates shall be taking the test at their own risk and responsibility as far as their eligibility is concerned and the University shall, in no way, be responsible if they are found to be ineligible, later, leading to cancellation of their result or any other consequence(s) emanating from the same.
 33. The result of the Entrance Test will be made available at <http://results.puchd.ac.in>.
 34. The date by which Roll No will be available online is **27-06-2017 (Tuesday)**. Admit Card required to be downloaded from the website by the candidates using their own Login and Password (provided while generating Bank Challan). **There will be no physical communication for this purpose.**

35. On 05-07-2017 (Wednesday) by 1:00 P.M., the Question papers and Answer Keys will be put on the University website <http://exams.puchd.ac.in/show-noticeboard.php>. The candidates can file their objections regarding discrepancies and accuracy of the Key by e-mail to arcet@pu.ac.in latest by 07-07-2017 (1:00 P.M.). The valid concerns thus expressed will be given due consideration while evaluation.
36. The following functionaries may be contacted only in case of extremely urgent enquiry from 10.00 a.m. to 4.00 p.m. (on working days only)
- | | |
|--|-----------------------------|
| PULEET Coordinator, | 0172-2541242, |
| University Institute of Engineering & Technology, Panjab University, Chandigarh-160014 | 0172- 2534997 |
| A.R. (CET Cell) | 0172-2534829 |
| | Mr. Sanjay Kumar 9872414298 |
37. Ragging in any form is banned in Panjab University, Chandigarh. If a student is found to have indulged in Ragging, strict action will be taken against that student, which includes expulsion from the Institution/Department.

SYLLABUS FOR PULEET - 2017

I. GENERAL ENGINEERING

(a) Basic Electrical Engineering

1. **DC circuits:** Voltage and current sources, Kirchhoff's laws and network solution, network analysis by mesh and node analysis, superposition theorem, Thevenin's theorem, Norton's theorem, delta-star transformation and vice-versa, maximum-power transfer theorem, energy storage elements, step response of RL, RC and RLC circuits.
2. **Single Phase AC Fundamentals:** Alternating current systems, waveform terms and definitions, average and r.m.s. values of alternating, quantities, phasor notation, solution and phasor diagram of single phase ac circuits with sinusoidal source excitation.
3. **Three Phase AC Fundamentals:** Disadvantages of single phase system, three phase voltages and currents, voltages and currents in star and delta connected systems, power in a three phase system, solution of three phase balanced circuits, power and power factor measurement by two watt-meter method.
4. **Magnetic Circuit:** Introduction to magnetic circuit, magneto motive force and magnetic field strength, permeability of free space, relative permeability, reluctance, comparison of electric and magnetic circuits, B/H curve, magnetic circuits calculations, self and mutual inductance.
5. **Transformers:** Introduction, Basic Principle, EMF equation, approximate equivalent circuit, phasor diagram, losses, efficiency and condition for maximum efficiency, voltage regulation, open circuit and short circuit tests.
6. **Electric Machines:** Operating principle and application of DC machine as generator and motor, EMF and Torque equations, methods of excitation.
Operating principle and applications of 3 phase squirrel cage and slip ring induction motors, equivalent circuit and torque speed characteristics (qualitative treatment)

Operating principle of single phase induction motor (split Phase and capacitor motors), torque-speed characteristics (qualitative treatment)

Principle of operation and applications of variable reluctance, permanent magnet and hybrid stepper motors, speed torque characteristics (qualitative approach)

(b) Basic Electronics

1. **Semiconductor Diode:** PN-Junction, Junction Theory, V-I characteristics of a PN-Junction Diode, Ideal Diode, Use of Diode in Rectifiers: Half Wave Rectifiers, Full Wave Rectifiers, Zener Diode, Varactor Diode, Light Emitting Diodes.
2. **Bipolar Junction Transistor:** Introduction, Junction Transistor Structure, Operation, Transistor amplifying action, CB, CC and CE Configuration, characteristics, application of transistor as an amplifier.
3. **Field Effect Transistor:** Introduction, Types of FET's, JFET's, MOSFET's, CMOS, characteristics, working, applications.

4. **Operational Amplifiers:** Block Diagram, Characteristics of an ideal OP-AMP, Application of OP-AMP as an Inverting amplifier, Phase Shifter, Scale Changer, Non-inverting amplifier, Adder or Summing amplifier, differential or difference amplifier, integrator.
5. **Oscillators:** Block Diagram of feedback circuit used as an oscillator, Barkhausen criterion, types of oscillators.
6. **Boolean Algebra and Logic Gates:** Binary and Hexadecimal number system, BCD and weighted codes, Binary arithmetic, Logic-positive and negative logic, basic and universal logic gates. Boolean algebra and postulates, reduction of Boolean expression.
7. **Flip Flops:** Concept of flip-flops, RS, D, JK and T types, triggered and clocked, master slave, Shift Register, concept of synchronous and asynchronous counters. Half and full adder, subtractor, Seven Segment display, Concept of Mux, deMux, decoder and encoder.
8. **Test and Measuring Instruments:** Block diagram, concept of digital electronic voltmeters, ammeter and wattmeter, CRO, Signal Generators, Sensors and Transducers and their classification. Working principle of resistive, capacitive, photosensitive and temperature transducers. Block diagram and working principle of analog and digital data acquisition system.
9. **Communication:** Basic Concepts, Modulation, Need for modulation, introduction to AM, FM, PM.

(c) Programming Fundamentals

1. **Introduction:** Computer Basic, Block Diagram of Computer, Memory Hierarchy, Types of RAM, Secondary Memory Introduction to Operating Systems, Programming Languages, Program Structure, Linux Shell Commands, Bourne Shell, C Shell, Korn Shell
2. **Basic Constructs of C:** Keywords, Identifiers, Variables, Symbolic Constants, Data Types and their storage, Operands, Arithmetic Operators, Relational Operators, Logical Operators, Bitwise Operators, Increment & Decrement Operators, Expressions, Conditional Expressions, Assignment Operators and Expressions, Type Conversions, Precedence and Order of Evaluation, External Variables and Scope of Variables. Basic Input Output, Formatted I/O.
3. **Program Control Flow:** Statements and Blocks, Conditional Statements, IF, ELSE-IF, Switch Case statements, Control Loops, For, While and Do-While, Go to and Labels.
4. **Arrays & Functions:** Pointers and Addresses, Arrays, Multi dimensional arrays, strings, pointer arrays, Functions, Function Prototyping, Scope of functions, Arguments, Call by value and call by references, static variables, recursion, C-Preprocessor and Macros, Command line arguments.
5. **Structures:** Structures, Array of Structures, pointer to structures, Typedef, Unions, Bit fields, passing structures as an argument to functions
6. **Input and Output:** Standard and Formatted Input and Output, File Access & its types, Line Input and Output, Types of Files, Binary & ASCII Files, Error handling, stderr and Exit functions

7. Introduction to Object Oriented Programming: Classes and Objects, Structures vs Classes, Abstraction, Encapsulation, Polymorphism, Inheritance.

(d) Fundamentals of Mechanical Engineering

- 1. Laws Of Thermodynamics:** First law of thermodynamics, Steady flow energy equation and its applications (nozzle, throttling device, turbine, compressor, heat exchanger). Limitations of first law, statements of second law by Max-planck and Clausius, equivalence between the two statements. Reversible and irreversible processes, Carnot's theorem. Energy analysis of a heat engine, refrigerator and heat pump.
- 2. Steam and Its Formation:** P-V, P-T, T-S, H-S diagrams of water. Dryness fraction and its measurement by calorimeter. Uses of steam tables and mollier chart (H-S chart)
- 3. Power Cycles:** Carnot and Rankine steam power cycles. Effect of mean temperature of heat addition on Rankine cycle efficiency. Otto, Diesel and Dual combustion cycles for reciprocating I.C. engines.
- 4. Kinematics Of Fluid Flow:** Types of flow, acceleration in fluid flow, stream lines, stream tubes, irrotational flow, stream function, velocity potential, flow nets.
- 5. Fluid Dynamics:** Equation of continuity, Euler's Equation, Bernoulli's equation, simple applications to one dimensional flow problems.
- 6. Flow Measurement:** Pilot tube, Venturimeter, Orificemeter, Notches (Rectangular & Triangular) and weirs, Rotameter.
- 7. Simple Stress and Strains:** Concept of stress and strain. Stress and strains in bars subjected to tension and compression, stress-strain diagrams, mechanical properties, factor of safety, Extension of Uniform bar under its own weight, stress produced in compound bars (two or three) due to axial loads.
- 8. Bending moment (B.M.) and Shear force (S.F.):** Diagrams for cantilevers, simply supported beams with or without overhang and calculation of maximum B.M. and S.F. and the point of contra flexure under the following loads. Concentrated loads, Uniformly distributed loads over whole span or part of span, combination of concentrated loads (two or three) and uniformly distributed loads.
- 9. Bending and Torsion:** Stress in beams due to bending, proof of formulae $M/I = f/y = E/R$ and its application to beams of rectangular and circular section. Application of torsion equation to hollow and solid circular shaft.

(e) Fundamentals of Civil Engineering

- 1. Construction Material and Building Construction:** rock, Bricks & Tiles, Cement, Lime Timber and paints, Excavation of foundation, Brick Masonry, Stone Masonry, Wall, Mortar & Concrete, Damp-proofing, Doors-windows, Roof, Floors, Stairs and Building planning.
- 2. Hydraulics :** Fluids and Properties of fluids, Hydrostatic Pressure, fluid flow and measurement through pipe and open channel
- 3. Concrete and Structures:** Concrete and Properties of Concrete, Formwork, ordinary and special concrete, Concrete Operation. Stress & strain, Bending Moment & Shear Force, Slope and Deflection, Columns and trusses.

4. **Reinforced Concrete Structures:** Reinforcement, Theory of RCC Beams, Bonds in RCC Beams, Singly & Doubly RCC Beams, RCC Slabs, Reinforced Brick Works and Columns.
5. **Steel Structure:** Structural Steel Section and Connections, Tension, Compression and Beam Members.
6. **Surveying:** Chain & Compass Surveying, Leveling using Dumpy and IOP Level.
7. **Irrigation Engineering:** Rainfall and Run off, Crops water requirement, Irrigation and types of irrigation, Canal Works, Water logging and Drainage, Dams.
8. **Transportation Engineering:** Road Geometrics, Highway Surveying, Road Material and Pavement, Road Drainage and Maintenance.
9. **Soil Mechanics:** Physical Properties of soil and Soil classification, Water flow through soil and Soil Deformation, Strength Characteristics of soil and soil Compaction, Bearing Capacity and Site Exploration
10. **Estimation and Costing :** Estimation and Types of estimation, Analysis of Rates, Irrigation Work Estimation, Road Work Estimation and Valuation.

II. PHYSICS

(a) MECHANICS

Linear kinematics and its equations of motion, projectile motion, circular motion.

Newton's laws of motion, principle of conservation of momentum applications to linear and planar motion, concept of friction and its laws, motion on smooth and rough inclined planes, simple and complex Atwood's machines.

Concept of work, energy and power, work-energy principle, principle of conservation of energy.

Rotational motion, equations of rotational kinematics, moment of inertia and radius of gyration of a rotating body; torque and angular momentum; work, power and energy in rotational motion, conservation of angular momentum.

Simple harmonic motion and its characteristics, energetics of simple harmonic motion, idea of damped and forced oscillations, resonance and its applications.

Wave motion and its characteristics, theory of sound propagation, velocity of sound and factors influencing the velocity of sound, Doppler effect in sound, superposition of sound in space (stationary waves) and time (beats), vibrations of air columns and stretched strings.

(b) OPTICS

Geometrical optics, reflection and refraction of light, reflections by spherical mirrors, refraction through lenses, spherical and chromatic aberrations, dispersion and deviation of light through prism, optical microscopes and telescopes.

Wave nature of light; interference, Young's double slit experiment, Lloyd's mirror and Fresnel's biprism techniques for producing interference pattern, interference through

thin film, colouring of thin films; diffraction of light through a single slit, Rayleigh's criteria of resolution, resolving power of optical instruments ; concept of polarization, methods of producing polarized light, analysis of polarized light, Doppler effect in light.

Laser, its principle, characteristics and applications.

(c) HEAT

Thermometry, idea of specific heat and heat capacity, latent heats of fusion and vaporization, variation of specific heats of solids, liquids and gases with temperature, concept of degree of freedom, law of equipartition of energy.

Modes of heat transfer (conduction, convection and radiation); linear, surface and volume expansion of matter on heating.

(d) ELECTRODYNAMICS

Electric field and electric potential, electric dipole and its field, Gauss' law and its applications; concept of capacitance, energy stored in a capacitor, effect of introducing dielectric and conducting slabs between plates of a capacitor, dielectric constant of material.

Current electricity, Kirchoff's laws and applications, thermal and chemical effects of current, slide wire bridge, potentiometer, ammeter and voltmeter.

Magnetic effects of current, Biot-Savart law and its applications, Lorentz force, moving coil galvanometers ; laws of electromagnetic induction, eddy currents and its applications, self and mutual inductance.

(e) MODERN PHYSICS

Black body radiation distribution, photoelectric effect, idea of x-ray production, wave-matter duality and de-Broglie waves, position-momentum uncertainty principle.

Crystalline and amorphous solids, basic idea of crystal structures (simple cubic, body-centered cubic, face-centered cubic) and their characteristics, close packing morphologies, Schottky and Frenkel defects in crystals.

Rutherford scattering experiment, Bohr's model and hydrogen spectrum.

Nucleus and its properties (mass, size, binding energy, magnetic and quadrupole moments), nuclear forces and its properties, phenomenon of radioactivity and its laws, modes of radioactive decays (α , β and γ), nuclear fission and fusion.

III MATHEMATICS

(a) Algebra:

Quadratic Equations, equations reducible to quadratic form, relation between roots and coefficients, Arithmetic Progression, Geometric Progression, Arithmetico-Geometric Progression, Harmonic Progression, Series of Natural Numbers.

- (b) **Matrices:**
Concept of linear independence and dependence, Rank of a matrix: Row – Echelon form, System of linear equations: Condition for consistency of system of linear equations, Inverse of a matrix.
- (c) **Trigonometry:**
Trigonometric ratios and their relations, ratios of some standard angles, solution of trigonometric equations, sum and difference formulae, product formulae, multiple and sub-multiple angles, solution of triangles.
- (d) **Coordinate Geometry:**
Cartesian coordinates, equations of straight line in various forms, intersection of two straight lines, angle between two lines, distance formula. Equation of circle in various forms, tangent and normal to circle.
- (e) **Differential Calculus of Functions of one variable:**
Successive Differentiation, Leibnitz Theorem, Expansions of functions: Taylor's and Maclaurin's Series, Formulae for remainder term in Taylor and Maclaurin series, Angle of contingence, Curvature, Radius of curvature, Centre of curvature for curves in Cartesian form. Curvature at the origin: Newton's formulas.
- (f) **Differential Calculus of Functions of two variables:**
Concept of limit and continuity of a function of two variables, Partial derivatives, total differential, differentiation of an implicit function, chain rule, change of variables, Jacobian, Taylor's and Maclaurin's series. Maxima and minima of a function of two variables: Lagrange's method of multipliers.
- (g) **Ordinary Differential Equations:**
Review of geometrical meaning of the differential equation $y' = f(x, y)$, directional fields, Exact differential equations, Integrating factors.
- (h) **Integral Calculus:**
Reduction formula for $\int \sin^n x dx$, $\int \cos^n x dx$,
 $\int \sin^m x \cos^n x dx$,
 $\int x^m (\log x)^n dx$, $\int x^n e^{ax} dx$, $\int x^n \sin mx dx$, $\int x^n \cos mx dx$, Areas of curves, Length of curves, Volume and surface areas of revolution, Double integrals, Change of order of integration, Areas enclosed by plane curves.
- (i) **Vector Differential Calculus:**
Vectors and scalar functions and fields, derivatives. Curves, tangents, arc lengths, Curvature and torsion of a curve, Gradient of a Scalar field, Directional Derivative, Divergence of a vector field, Curl of a vector field.
- (j) **Vector Integral Calculus:** Line integrals, Line integrals independent of path, Green's theorem in the plane, Surface Integrals, Triple integrals, Gauss Divergence Theorem, Stoke's Theorem.

IV ENVIRONMENT EDUCATION

Ecology and Ecosystems

Structure and functions of Ecosystems, producers, consumers & Decomposers, ecological succession, food chains, food webs & ecological pyramids.

Biodiversity and its conservation

Genetics, species, and ecosystem diversity, Biodiversity at global, National and Local levels, Threats to diversity.

Natural Resources

Air resources, composition, air quality management

Forest resources, deforestation, case studies, timber extractions, mining, dams and their effects on forests.

Water Resources: Use and over utilization of surface and water, floods, draught, water quality management.

Food Resources; World food problems, effects of modern Agriculture, water logging.

Energy Resources: Growing energy needs, renewable and non renewable energy sources.

Land Resources: Land degradation, soil erosion & desertification

Environmental Pollution

Air pollution, water pollution, thermal pollution, soil pollution, noise pollution, their causes, effects & control measures.

Pollution Case Studies, Role of an individual in prevention of pollution.

SAMPLE QUESTIONS FOR PULEET - 2017

1. The efficiency of a Carnot engine is dependent on:
 - (a) Specific heat of gas used
 - (b) Temperatures of source & sink
 - (c) Rapidity of compression and expansion of gas used
 - (d) All of the above
2. The ball of 100 g is in uniform circular motion of radius 4m and has a constant speed of 2 m/s. The centrifugal force acting on it will be
 - (a) 100 N
 - (b) 0.1 N
 - (c) 10 N
 - (d) None of these
3. The value of $\sin 10^\circ + \sin 20^\circ + \sin 30^\circ + \dots + \sin 360^\circ$ is
 - (a) 1
 - (b) 0
 - (c) -1
 - (d) None of these
4. The system of linear equations $AX=b$ where A is $m \times n$ matrix of coefficients, X is $n \times 1$ vector of unknowns, b is $m \times 1$ vector of unknowns is consistent if
 - (a) rank A = rank (A|b)
 - (b) rank A \neq rank (A|b)
 - (c) rank A = 0
 - (d) rank A = n+m
5. If one root of a quadratic equation with real coefficients is $\frac{1}{3+4i}$, then the other root is
 - (a) 3-4i
 - (b) $\frac{3}{25} + \frac{4}{25}i$
 - (c) $\frac{3}{25} - \frac{4}{25}i$
 - (d) $\frac{4}{25} - \frac{3}{25}i$
6. Pitot tube is used to measure
 - (a) Discharge
 - (b) Velocity
 - (c) Temperature
 - (d) None of these
7. During _____ Throttling remains constant
 - (a) Heat
 - (b) Temperature
 - (c) Enthalpy
 - (d) Internal Energy
8. In a differential amplifier, CMRR can be improved by increasing
 - (a) Emitter Resistance
 - (b) Collector Resistance
 - (c) Power Supply Voltage
 - (d) Source Resistance
9. If an amplifier with a gain of -1000 had a gain change of 20% due to temperature. It was provided the feedback with feedback factor $\beta = -0.1$, now the change in gain with feedback will be
 - (a) 10%
 - (b) 5%
 - (c) 0.2%
 - (d) 0.01%
10. 8085 microprocessor can address memory space of
 - (a) 256 B
 - (b) 128 KB
 - (c) 64 Kb
 - (d) 1 MB
11. Default access types of member variable in classes is
 - (a) private
 - (b) public
 - (c) protected
 - (d) static

12. Which of the following operator has the highest precedence
- +
 - /
 - *
 - ++
13. Which of the following statement is invalid
- $x=y+++z$;
 - $x+=y$;
 - $++x++$;
 - $a+b=c+d$;
14. A series RLC circuit offer the impedance value at resonance that is
- maximum
 - minimum
 - infinite
 - none of these
15. In Star connection for balanced load, the current flowing in neutral wire is
- minimum
 - maximum
 - zero
 - none of above
16. In an SCR, the break over voltage V_{BO}
- increases with increase of positive gate current
 - is independent of gate current
 - decreases with increase of positive gate current
 - none of above