

HIMACHAL PRADESH UNIVERSITY
GYAN PATH, SUMMER HILL, SHIMLA
ON BEHALF OF
THE GOVERNMENT OF HIMACHAL PRADESH
DEPARTMENT OF INDIAN SYSTEM OF MEDICINE
AND HOMOEOPATHY (AYURVEDA)
PROSPECTUS
FOR
ENTRANCE TEST FOR
ADMISSION TO B.A.M.S. & B.H.M.S. COURSES
SESSION 2016-2017



IN
RAJIV GANDHI GOVERNMENT POST-GRADUATE AYURVEDIC
COLLEGE PAPROLA - 176115, DISTT. KANGRA (H.P.)
AND
SOLAN HOMOEOPATHIC MEDICAL COLLEGE & HOSPITAL
KUMARHATTI, SOLAN (H.P.)

Entrance Test ONLINE Application Fee:

- | | | |
|------------|---|-------------------|
| i) | For General & Other Categories | Rs. 1600/- |
| ii) | For SC/ST Categories | Rs. 800/- |

Schedule for submission of online Application Form with Fee: From 27.05.2016 to 27.06.2016

Date of Entrance Test: 17.07.2016(Sunday)

IMPORTANT DATES AND INFORMATION AT A GLANCE

1.	Schedule for filling up online Application Form with transaction of fee:	27.5.2016 to 27.6.2016
2.	Last date of receipt of Computer Generated Confirmation copy of online application form in the office of the Assistant Registrar, (Entrtance Tests) H.P.University, Shimla-5	5 .7.2016
3.	Tentative Date of uploading Admit Cards on the University Website www.hpuniv.in : (Note: No separate Admit cards shall be sent by post by the University)	11.7.2016
4.	Date of Entrance Test in the specified Examination centres: i.e. Dharmshala/Hamirpur/Mandi/Shimla	17.7.2016(Sunday)
5.	Display of key Answers in the H.P.University website : www.hpuniv.in and receiving of representationS from the candidate(s) with regard to correctness of key answer with documentary proof, if any, by the Deputy Registrar(Secrecy) H.P. University, Shimla-5	21.07.2016 to 25.7.2016
6.	Tentative Date of Declaration of Result	30.07.2016
7.	Tentative Date of issuance of Merit list	12.8.2016
8.	Ist Round of Counselling for admission to B.A.M.S. Course at H.P. University Auditorium, Summer Hill, Shimla-5 as per schedule given in the Prospectus under Heading-8 “Counselling”.(Note: No separate call letters will be sent to the candidates for counseling)	7.9.2016
9.	i) Candidates recommended by the Counselling Committee for admission to BAMS course shall have to appear for Medical Examination before the Medical Board in Rajiv Gandhi Govt. Post-graduate Ayurvedic College Paprola, Distt. Kangra, H.P. ii) The candidates found medical fit, have to deposit the fee & dues in the said college latest by: (Note: The above dates for admission in the college are tentative and further subject to receipt of required permission from the CCIM/AYUSH, Govt. of India for the academic session 2016-17. In case of any change, the same will be intimated to the candidates concerned through University website www.hpuniv.in . The candidates are advised to remain in touch with the University website till the completion of admission process in the College.	15.9.2016 at 10.a.m. 16.9.2016 upto 4 pm
10	Dates for holding the counseling for BHMS course at Solan Homoeopathic Medical College & Hospital, Bye-Pass Road, Kumarhatti, Distt. Solan(HP) for State/ Management Quota Seats	10.9.2016 at 11.00 a.m.
11.	Commencement of academic Session :	16.9.2016
12.	Time schedule for Entrance Examination a) Centre of Examination b) Entry in the Examination Hall c) Distribution of question-Booklet & Answer Sheet d) Test Commencement e) Latest Entry in the Examination Hall f) Test conclusion	(17.07.2016) (Sunday) As indicated on the Admit Card 10:00 a.m. 10:20 a.m. 10:30 a.m. 10:45 a.m. 01:00 p.m.
13.	Material to be brought on the day of examination : Admit card downloaded from the H.P. University Website i.e. www.hpuniv.in , Card Board/Clip board and Ball Point pens of good quality (Blue/Black).	
14.	Rough Work.: All rough work is to be done in the Question Booklet only in the space provided for the purpose. The candidates are not allowed to do any rough work or put stray mark on the machine gradable Answer Sheet.	
15.	Use of Blue/Black Ball Point Pen only for Writing of Particulars on the Question Booklet, Answer Sheet and Responses on the Answer Sheet.	
16.	The candidate is required to go through the Prospectus carefully and acquaint himself/herself with all requirements with regard to filling-up online Application Form No. The candidate, before filling-up the online Application form, shall satisfy his/her eligibility to appear in the Entrance Test.	

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PART-A

1. INTRODUCTION

- a. The Himachal Pradesh University will conduct a combined Entrance Test on behalf of Government of Himachal Pradesh, Deptt. of Indian System of Medicine and Homoeopathy (Ayurveda) in terms of provisions contained in chapter XIV of the First Ordinances of the Himachal Pradesh University (as amended from time to time) for admission to BAMS Course in Rajiv Gandhi Govt. Post Graduate Ayurvedic College, Paprola, Distt. Kangra (H.P.) and for State Quota seats as also Management Quota Seats in BHMS Course in Solan Homoeopathic Medical College & Hospital, Kumarhatti -173229 Distt. Solan an affiliated college of the University.
- b. The applicants may apply for admission to BAMS/BHMS Course on the prescribed ONLINE Application Form as provided in the University websites through this Entrance Test. Applicants should have to submit the prescribed fee as per online instructions.
- c. **Duration of Course:** 5½ years including one-year compulsory rotatory internship.

2. DISTRIBUTION OF SEATS AND ADMISSION CRITERIA

(A) **BAMS : 60 seats**(Subject to actual permission of Ministry of Ayush, Government of India)

GROUP-WISE DISTRIBUTION OF SEATS :

- (i) Group-I : 51 seats i.e. 85% of the total seats are reserved for Bonafide Himachalis.
- (ii) **Group-II : 2 seats for Govt. of India Nominee.**
- (iii) Group-III : 7 seats i.e. one seat for Malaysian Nationals and one seat for ICCR Sponsored Candidates and remaining 5 seats to be filled on All India Basis against which Bonafide Himachali who have applied for Group-I seats will also be considered on the basis of over all merit of the Entrance Test.

GROUP-WISE RESERVATION OF SEATS :			
Group-I	Sr. No.	Name of the Category	No. of Seats
	(i)	General/Un-reserved	26
	(ii)	Scheduled Castes	08
	(iii)	Scheduled Tribes	04
	(iv)	Other Backward Classes	06
	(v)	Backward Area	02
	(vi)	Children of Ex-Servicemen	01
	(vii)	Children of Defence person	01
	(viii)	Ward of freedom Fighter	01
	(IX)	Physically Handicapped	02
		Total	51
Group-III	Sr. No.	Name of the Category	No. of Seats
	(i)	General	03
	(ii)	Scheduled Castes	01
	(iii)	Scheduled Tribes	01
	(iv)	Malaysian Nationals	01
	(v)	ICCR Sponsored Candidates	01
		Total	07

Note : (i) At least 5 female candidates excluding those admitted under reserved category(ies) are required to be admitted in BAMS Course and in case of short fall in the

required number of female candidates, the same shall be met out of General/Un-reserved seat(s).

- (ii) The admissions to the BAMS Course will be subject to approval of the CCIM and Central Council of Homoeopathy (CCH) in case of BHMS for the session 2016-2017.
- (iii) In case the seats reserved for Malaysian Nationals and ICCR (Indian Council for Cultural Relations) sponsored foreign candidates are not filled from the eligible candidates by the 10th October, 2016, the same shall be treated as vacant and will be filled from the candidates in the waiting list.

(B) BHMS : 75 Seats

STATE QUOTA SEATS (GROUP- A) = 47, MANAGEMENT QUOTA SEATS (GROUP - B) = 28

The distribution of State Quota and Management Quota Seats to be filled-up on the basis of Entrance Test is as under :-

Sr. No.	Category	Number of Seat(s) in State Quota	Number of Seat(s) in Management Quota
(i)	General/Un-reserved	20	19
(ii)	Scheduled Castes	06	05
(iii)	Scheduled Tribes	03	03
(iv)	Other Backward Classes	08	-
(v)	Backward Area	03	-
(vi)	Children of Ex-Servicemen	02	-
(vii)	Children of Defence person	02	-
(viii)	Ward of Freedom Fighter	02	-
(ix)	Physically Handicapped	01	01
	Total	47	28

(C) CRITERIA FOR BACKWARD AREA SEATS : These seats are reserved for candidates belonging to backward areas as notified by the H.P. Govt. from time to time in the following manner; provided further that the candidate under this category must fulfill the basic eligibility criteria given under heading -4 of the Prospectus:

- (a) Candidates belonging to the backward area must be permanent resident of that particular backward area and must have passed at least two examinations i.e. primary/middle/matric/+1/+2 from the schools located in the backward area.
- (b) If no candidate as per (a) is available then a candidate belonging to backward areas will be considered.
- (c) In case no candidate as per (a) and (b) above is available for the backward areas seat, the same will go to general category candidate.

(D) CRITERIA FOR PHYSICALLY HANDICAPPED : The candidate must possess a valid document certifying his/her physical disability as per CCIM guidelines pursuant to Judgment of Hon'ble Supreme Court of India i.e. one category viz, physically handicapped with locomotory disorders and that too with disability of lower limbs between 51% to 70%. "Provided further that in case candidates are not available in that category then only candidates with disability of lower limbs between 40% to 50% shall be considered for admission." The disability certificate for claiming the reservation for physically handicapped seat should be issued by a duly constituted and authorized medical board of the State or Central Government Hospital/ Institution.

(Note: This is subject to the outcome in the writ petition (Civil)184/2005-"Dr. Kumar Sourav Vs. GOI & Others pending in the Supreme Court of India.)

(E) CRITERIA/GUIDLINES FOR FILLING OF RESERVED SEATS :

- (i) The candidates falling under reserved categories, if selected on merit under General Category of any group shall not exhaust the seats listed for reserved categories. The candidate of reserved category who fulfils the minimum eligibility criteria and scores minimum qualifying marks in the entrance test is entitled to be considered for admission under General Combined merit.
- (ii) A candidate wishing to be considered for a reserved seat, shall in his/her online application form specify only one category of reserved seat for which he/she has applied for. He/she will not be permitted to change the category once indicated in his/her application form. Provided further that this will not prejudice his/her case for being selected against General/un-reserved seats by virtue of his/her merit.
- (iii) The seats reserved for SC and ST categories are interchangeable in a group if sufficient number of candidates in any of these categories are not available. If candidate(s) of any reserved category is not available in any group, the same shall go to Group-I general category of respective group and thereafter any vacant seat shall go to group-I general category.

3. DEFINITIONS

- 3.1 (i) Bonafide Himachali :** The Bonafide Himachali is a person who fulfil the conditions as provided in the certificate available at Appendix A-1. The bonafide Certificate issued by the competent authorities during the year of the competitive test will only be acceptable.
- (ii) Backward Areas:** The Backward areas as listed in the Notification No. PLG-F (BASP) 1/95 dated the 16th June 1995 issued by the Financial Commisloner-cum-Secretary (Planning) Govt. of Himachal Pradash, or areas as may be notified to be Backward Areas by the Government of Himachal Pradesh from time to time.
- (iii) Freedom Fighter:** "Freedom fighter" is a person as declared by the H.P Government. 'Wards' means their children/grand children (only from paternal side) of the Freedom Fighters, Provided that benefits given by the Government to the children/grand children (from paternal side) can also be given to the sons/daughters (from maternal side) of a Freedom Fighter subject to the condition that the Freedom Fighter is/was not having a son.
- (iv) Defence Personnel:** "Defence personnel" means serving personnel of three wings of Armed Forces i.e. Army, Air Force and Navy.
- (v) Ex-Serviceman:** "Ex-serviceman" means retired personnel of three wings of Armed Forces i.e. Army, Air Force and Navy

4. ELIGIBILITY AND QUALIFICATIONS

A. BAMS COURSE :

Educational Qualifications and Other Conditions: Candidates should have passed/appeared in any one of the qualifying examination at the time of applying for the entrance test :-

- a) 10+2 new Course Examination of a University/Board established by law in India, or an equivalent examination with Physics, Chemistry and Biology subjects which shall include a practical test in Science subjects with 50% marks in aggregate (40% marks for Scheduled Castes/Scheduled Tribes/Other Backward Classes) and has also qualified the subject of English.

OR

The B.Sc. Degree with 50% marks (40% marks for Scheduled Castes/Tribes/Other Backward Classes) of a University established by law in India with any three

subjects out of Botany, Zoology, Chemistry, Physiology, Physics, Human Anatomy and Bio-Chemistry; provided that such a candidate must have passed the Pre-Medical or an equivalent examination with English as compulsory subject of Board/University established by law in India.

OR

Any examination of a University/Board/College or School in a foreign country, recognized as equivalent for the purpose by the Association of Indian Universities, New Delhi.

- (b) The candidates who have appeared/appearing in Plus two examination or its equivalent examination and the result of the same has not yet been declared can also apply for the Combined BAMS/BHMS Entrance Test, but the admission will be subject to the production of passing the plus two examination or its equivalent examination with required percentage of marks as per eligibility clause in the Prospectus at the time of first round of counselling.
- (c) The above qualifications will only determine the eligibility of a candidate for admission but the admission shall be based on the performance in the Entrance Test in the subjects of Physics, Chemistry and Biology.
- (d) The minimum qualifying marks for admission to BAMS/BHMS Course shall be 50% for General category, 45% for General Physical Handicapped and 40% for Scheduled Castes/Scheduled Tribes/Other Backward Classes/Physically Handicapped candidates respectively.
- (e) The Candidate should have already completed or should complete the age of 17 years and must not have completed 25 years of age on 31st December of the year of the concerned competitive examination. Date of birth as recorded in the Matriculation/Higher Secondary Certificate/Indian School Certificate will only be valid.

B. BHMS COURSE :

- 1. The candidate should have passed 10+2 from H.P. Board of School Education or from a recognized Board or equivalent degree/examination passed with Science [Medical group with Physics, Chemistry & Biology] of the University/H. P. Board of School Education in Science subjects.
- 2. Should have attained the age of 17 years on or before 31st December of the year of admission to the first Prof. of the course.
- 3. Blind [including colour blind], deaf and/or dumb candidates shall not be allowed for admission to the course.

5. CRITERIA FOR ADMISSION TO BAMS/BHMS

A. BAMS Groups-wise :

- (i) **Group-I** - The candidates should be a bonafide resident of Himachal Pradesh and should possess minimum educational criteria as prescribed in the prospectus.
- (ii) **Group-II**- The Govt. of India nominee shall have to fulfill the eligibility conditions i.e. he/she must have passed 10+2 (Physics, Chemistry, Biology) with at least 55% marks or its equivalent examination and also age condition as laid down in the prospectus for the purpose but they will not be required to compete in the Entrance Test. These seats have been allocated to the State of J & K by the Govt. of India, Ministry of Health, F.W. (Deptt. of Ayush). The applications of the candidates nominated should be forwarded by the competent authority i.e. Secretary ISM, Govt. of J & K to the Director of Ayurveda, ISM & H. Govt. of H.P., Ayurveda Bhawan, Block No. 26, SDA Complex, Kasumpti, Shimla-171009 with a copy to the Principal R.G. Govt. P.G. Ayurvedic College Paprola - 176115 Distt. Kangra (H.P.) by the stipulated date. Such candidates will have to appear before the counselling

committee on the stipulated date and time mentioned in the prospectus or report to the Principal of the College concerned.

In case, Govt. of J&K does not make any nominations or if any the candidates if any as recommended failed to join the course within four weeks from the commencement of course, the college authority will be free to fill up one seat each from the candidates belonging to backward area and general category of Group I respectively.

- (iii) **Group - III** - These seats are to be filled up on All India Basis, there is no condition of Bonafide Himachali and all candidates who possess the minimum educational qualification and other criteria as prescribed in the prospectus are eligible to be covered under this group. The bonafide Himachali candidates will also be considered for Group III Seats on the basis of combined merit. The eligibility criteria for the foreign sponsored candidates shall be as prescribed and approved by the CCIM/ Govt. of India. However, they are not required to appear in the Entrance Test.

B. BHMS Groups-wise :

(i) **Group-A (State Quota Seats):** The candidates should be a bonafide resident of Himachal Pradesh and should possess minimum educational criteria as prescribed in the prospectus.

(ii) **Group-B (Management Quota Seats) :** The seats are open to all without any domicile conditions.

In case seats remain vacant under state quota in Scheduled caste and Scheduled tribe category then first preference will be given to those candidates who have applied under same category in Management quota, if seats still remain vacant then seats can be filled from general or other category.

However, in case the seats against state quota remain vacant even after exhausting the merit list of the Entrance Test will be filled-up by adopting the following admission procedure:-

- a) 1st preference will be given in order of Merit of +2 qualifying examination of those Bonafide Himachali candidates who have also appeared in Entrance Test subject to fulfillment of the eligibility criteria as prescribed for State Quota Seats. The qualified candidates of the Entrance Test if applied, will be given preference.
- b) 2nd preference will be given in order of merit of +2 qualifying examination of bonafide H.P. candidates who have passed +2 examination from Govt./recognized school in HP with at least 50% marks in +2 and 40% in case of SC/ST/OBC candidates.
- c) 3rd Preference will be given in order of merit of +2 qualifying examination of those bonafide HP candidates who have passed +2 examinations from any Government/recognized school in India with at least 50% marks in +2 and 40% in case of SC/ST/OBC candidates.
- d) In case the seats in the State Quota remain vacant even after exhausting the procedure available under 3rd preference, then the candidates at the top of merit list of Management Quota will be converted into State Quota Seats to fill-up the remaining vacancies in the State Quota. In such cases the preference will be given to those Bonafide Himachali candidates who have sought admission on the basis of merit of Entrance Test under Management Quota or those Bonafide Himachali who have appeared in the Entrance Test will be given preference on the basis of +2 merit. The candidates so admitted/ converted against such seats shall be charged the fee payable by the State Quota candidate. Resultant vacancies arising due to conversion of Management Quota Seats to the State Quota will be filled up from the waiting list of Management Quota Seats.
- e) For filling up the vacant seats under State/management Quota in private BHMS course as per procedure mentioned above, the interested eligible candidates may apply to the Principal of the Homeopathic Medical College & Hospital, Bye Pass Road, Kumarhatti, Distt. Solan for seeking admission under State/Management Quota on the Counselling –cum-Admission Form which is attached in the Prospectus on mentioning full particulars along with required documents. The Principal of the College prepared the merit list

category-wise and the same will be uploaded on the college website as well as notice Board of the College. The College may also inform the candidates telephonically about the date of Counselling. In this regard, the candidates may be noted that they must write down their correct Mobile No. in the Application Form . **The Counselling will be held in the presence of the representatives of the Director, Ayurveda Govt. of H.P, Principal, Rajiv Gandhi Govt. Ayurvedic Post Graduate College, Paprola and H.P. University, Shimla**

6. DETAILS OF ENTRANCE TEST

1. The admission to BAMS/BHMS course shall be made on the basis of merit of Entrance Test to be conducted by the Himachal Pradesh University on the schedule date as mentioned in the prospectus. The name and address of the examination centre along with schedule of the entrance test will be communicated on the admit cards to be made available on the University website www.hpuniv.in for appearing in the Entrance Test. Examination Centre once opted by the candidate will not be changed under any circumstances. However, University reserves the right to allot any centre in view of exigencies.
2. **ADMIT CARD_:** The University will provide the facility of downloading the admit Cards for appearing to BAMS/BHMS Entrance Test-2016 on the University Website www.hpuniv.in . The candidates are required to download the Admit cards from the website by following the instruction/schedule given therein. The candidate may please note that Admit Cards will not be sent by post. The Admit cards uploaded on website will be provisional and does not entail the eligibility of the candidate for admission to the course. The Admit Card will bear the Roll Number, Name, Father's Name, Category, Photograph, Date, Time, Venue of Entrance Test. The candidate should carefully examine the Admit Card downloaded by his/her for all the entries made therein. In case of any discrepancy/error the candidate should immediately inform the University. In such cases, candidates would appear in the examination with the already downloaded Admit Card. However, the University will take necessary action to make correction of factual error in the record later. No candidate will be allowed to sit in the test without having Admit Card and the University will not be responsible on this account. The candidates are advised to preserve their Admit cards in good condition till admission in the BAMS/BHMS course is over.
3. The examination shall consist of one combined paper only, in the subjects of Physics, Chemistry (Including Organic Chemistry) and Biology in accordance with the syllabi of studies based on NCERT books of the Academic Session according to which 10+2 (includes 11th and 12th class) examination was conducted by the H.P. Board of School Education in the year of the competitive examination concerned which is attached in the Prospectus. The medium of examination shall be English. The question paper will be of objective (MCQ) type. **There will be 150 questions of one mark each in all. 50 questions each of Physics, Chemistry, and Biology. The Entrance Test will be of 2½ hours duration.**
4. Before declaration of the result of the Entrance Test, the key Answers as provided by the Examiner(s) will be moderated by a Committee of the subject experts to be constituted by the Vice-Chancellor immediately after holding the Entrance Test and before declaration of result of the said entrance test. If the Committee feels that the key answers provided by the examiner is not proper it will after taking

into consideration the views of the Examiner, give reasons for differing with the answer. In case a question has more than one correct answer, the committee will indicate the same in its report and where if no answer is correct, recommendations to this effect will also be made by the Committee. The Committee will also point out the printing error(s) in questions and their key answers, if any, and make necessary recommendations. Thereafter before declaration of the result, the key answers will be displayed on the University website: www.hpuniv.in from **21.07.2016 to 25.07.2016**. Still, if a candidate does not satisfy with the key answers, he/she may make representation to the **Deputy Registrar (Secrecy) H.P. University, Shimla-5** through fax No.0177-2831269 within stipulated period. Thereafter no representations will be entertained under any circumstances. The representations so received will be referred to the Moderation Committee of subject experts for its consideration and recommendations. In this regard, the decision of the Moderation Committee shall be final and binding upon to all concerned, and thereafter the result and its category-wise merit list will be declared/notified as per schedule.

5. The merit shall be determined on the basis of aggregate marks obtained by the candidates in the entrance test and a merit list shall be prepared for BAMS/BHMS courses by the Controller of Examinations.
6. For BAMS admission, the inter-se-ranking of the candidates obtaining equal aggregate marks in the entrance test shall be determined in the following manner:-
 - a) *The candidates having passed Sanskrit in Matric will be placed above those who have not studied Sanskrit. Their inter-se-merit shall be calculated keeping in view their percentage of marks in Sanskrit. If the marks obtained by the candidates in Sanskrit are equal the candidate who is older in age will be given preference.*
 - b) *The candidates having not passed Sanskrit in Matric, their inter-se-ranking in the event of obtaining equal aggregate marks in the Entrance Test, shall be according to marks obtained by the candidate in Biology, Chemistry and Physics in that order in the Entrance Test, even if still there is tie in the inter-se-ranking after exhausting the above procedure, then the candidate(s) older in age will be given preference.*
7. The result indicating marks in respect of all the candidates appearing in the Entrance Test will be declared and displayed on the University Notice Board and website of the University www.hpuniv.in by the University.
8. In case a candidate intends to obtain photocopy of his/her OMR Answer Sheet he/she can apply for the same within seven days from the declaration of result to the **Dean of Studies H.P. University, Summer Hill, Shimla-5** along with a fee of Rs.100/- (one hundred) only in the shape of IPO's/Bank Draft Drawn in favour of Finance Officer, H.P. University, Shimla-5.

7. GENERAL INSTRUCTIONS

1. The candidate, before filling the ONLINE form, shall satisfy his/her eligibility to appear in the Entrance Test. The candidate is required to go through the Prospectus carefully and acquaint himself/herself with all requirements with regard to the filling up the application form.
2. The candidate shall fill-in-the online application form.
3. Wrong particulars filled in the online application form may lead to rejection of forms, which should be avoided. Any error on this account shall be the responsibility of the candidate.

16. If more than one circle is darkened or if the responses is marked in any other manner then specified in the prospectus the same shall be treated as wrong answer.
17. The candidate is advised to decide about the answer before he/she marks it on the answer sheet. He/she must ensure that the circle is completely darkened with Ball Pen. A lightly or faintly darkened circle might be rejected by the optical scanner.
18. Each question carries 1 mark. For each correct response the candidate will get one mark. There will be no negative marking.
19. **Important Instructions for marking:**
 - (i) Use Blue/Black Ball pen only. Darken the appropriate circle with it.
 - (ii) Mark should be dark and circle/oval should be completely filled in.
 - (iii) Darken only one circle for each entry/question.
 - (iv) Make the marks only in the space provided.
 - (v) Please do not fold the answer sheet and make any ROUGH WORK thereon.
20. **Procedure to be followed in the Examination Hall:**
 - (i) Ten minutes before the commencement of the Test each candidate will be given question Booklet along with answer sheet.
 - (ii) Immediately on receipt of the Question Booklet the candidate will fill in the required particulars on the cover page of the Question Booklet with Ball Point pen only. He/She will deal with the Booklet when asked by the invigilator.
 - (iii) The test will start exactly at the time mentioned in the Admit Card and an announcement to this effect, will be made by the invigilator.
 - (iv) In the examination hall, the invigilator will check Admit Card with the Identification Card of the candidates to satisfy himself/herself about the identity of each candidate. The invigilator will also put his/her signatures in the space provided in the answer sheet.
 - (v) The candidates shall bring their own Ball Point Pens. These will not be supplied by the University.
 - (vi) After completing the test, the Answer Sheet will be handed over to the Invigilator. However, the candidate should check again that all the particulars required in the Question Booklet and Answer sheet have been correctly written. Ensure that the Roll No. and other particulars are correctly written in the Answer Sheet. The Admit Card and question booklets will be retained by the candidates after the examination is over.
 - (vii) A signal will be given at the beginning of the examination and at the half-time. A signal will also be given before the closing time when the candidate must stop marking of responses.
21. Caution for the removal of page(s) from Question Booklet.
The candidate will check and ensure that the Question Booklet contains number of pages as are written on the top of the first page. The candidate shall not remove any page(s) from the Question Booklet and if any page(s) is /are found missing from his/her Booklet he/she will be proceeded against and shall be liable for criminal action.

8. IMPORTANT INSTRUCTIONS FOR FILLING-UP ONLINE APPLICATION FORM

(This application is compatible with Internet Explorer 7 or above, Google Chrome & Mozilla Firefox)

All the applicants are advised to read the Prospectus for BAMS/BHMS Entrance Test-2016 carefully before filling up the online Application Form which is available on H.P. University Website www.hpuniv.in in pdf format and also ensure that he/she is eligible in terms of the conditions/provisions mentioned in the Prospectus. The copy of the Prospectus may also be downloaded from the said website for ready reference. Please

read these instructions carefully before proceeding with the ONLINE filling of BAMS/BHMS Entrance Test Application Form 2016.

2. **Admit Cards/Roll Nos. can be downloaded** from the H.P. University Website www.hpuniv.in with effect from **11.07.2016**.
3. **Date of Entrance Examination 17.07.2016 (Sunday)**.

Important Steps

(A) **Before proceeding to apply, please ensure that you have:**

(i) **Scanned copy of candidate's recent photograph with following specifications.**

- Photograph must be a passport size color picture.
- Photograph must be taken in full face view directly facing the camera.
- Photograph should have no shadows and red eyes.
- Maximum size **50 kb**.
- Photo format should be jpg. only.

(ii) **Scanned copy of Candidate's signature with following specifications.**

- Candidate with black ink on a white paper and get the signature scanned.
- The signature must be signed only by the Candidate and not by the any other person.
- Maximum size **30 kb**.
- Scanned signature format should be jpg. only.

(iii) **Scanned copy of parent's signature with following specifications.**

- Candidate with black ink on a white paper and get the signature scanned.
- The signature must be signed only by the Candidate and not by the any other person.
- Maximum size **30 kb**.
- Scanned signature format should be jpg. only.

(B) Create an email account if you already don't have one.

(C) You must give a correct mobile number in basic details. If you don't have mobile number, please enter your parents/ guardian's mobile number for any further information in this regard.

(D) The fee for applying BAMS/BHMS Entrance Test is Rs. 1600/- for General & other Categories and Rs.800/- for SC/ST Categories.

(E) **PROCEDURE FOR FILLING UP ONLINE APPLICATION FORM FOR BAMS/BHMS ENTRANCE TEST-2016.**

1. Click on "**Register Now**" to create a new account. Once the new account is created online system **will generate the unique application form number**. Candidates are advised to **note down the application form number for all future references**.
2. After account creation, click **login** to complete the Entrance Examination application online.
3. Online Entrance Application form has following subsequent information.
 - Fee Payment
 - Basic Details Form
 - Upload Photo & Signature Form
 - Filled Form View Page with Edit & Confirmation Button.
 - Filled Form Downloaded Page (PDF Format).
3. Candidate's are required to fill their information in above mentioned web pages. All mandatory fields are marked with red star.
4. Upload photo and signature. Photo and signature uploaded should be **as per specifications and size listed in step (A)**.
5. To save the data, please click on '**Continue and Save**' button at the bottom of each screen before proceeding further.

6. Steps for making Application Fees Payment

- a) Once you click on **Fees Payment Button** new window of **SBI-Collect** will opened on your screen in which you have to complete the following steps for making the payment:

Step 1

- a) State of Corporate/ Institution : <Select> **Himachal Pradesh**
b) Type of Corporate/Institution: <Select> **Educational Institution**

Then click on **Go** button

Step 2

- a) Educational Institution Name: <Select> **FO, HPU**

Then click on **Submit** button

Step 3

- a) Select Payment Category:

<Select> **BAMS/BHMS Entrance Test (General & Other Categories)**

<Select> **BAMS/BHMS Entrance Test (SC/ST Categories)**

(Applicants are directed to select their respective category for making fee payment.)

Step 4

Enter all the details of payment as per the fields given on the present screen, all these fields are mandatory to fill for making the Application fee payment. Then press the **Submit** button.

Step 5

Once you **Confirm** the 'payment details', a new window will appear on your screen in which three modes of payment are there i.e 1) **Net Banking** 2) **Card Payment** (By Using Debit/Credit Card) 3) **Other Payment modes in which Challan is generated** and the applicant has to take the print out of that Challan to the nearest SBI Branch for depositing the Cash. In case of Net Banking and Card Payment, e-receipt will be generated. Then candidates are directed to take print out of that e-receipt for completing the application form and retained the same for his/her record for future reference also.

7. After depositing the fee in the bank, re-login to your account, *at least after 8 hours* to enter payment details, i.e. e-receipt/ Journal number as provided by the bank at the time of depositing the fee, in **Payment details page**.
8. Click on '**Save & Continue**' to see your filled application details on the computer, before proceeding further please make sure that all the fields are filled in correctly in the confirmation screen before clicking the **Submit** Button. **Once the applicant click on the Submit button of his/her application page, he/she cannot Edit/Change the details entered.**
9. After clicking on '**Submit**' button new window will appear on the Screen displaying full details of the applicant and then entered in the application form. Take the print out of the same page and **attach the copy of payment receipt along with the computer generated confirmation copy of the application form** for future reference.

Important Notes:

- **The candidates may, please note that the Admit Cards for the Entrance Test will not be sent By post by the H.P. University and the same will be downloaded by the candidates from University website i.e. www.hpuniv.in.**
- For any **technical query** with regard to filling the online application form, please contact-
0177-2831655, 2833582 (Computer Centre)
- For any pre-examination query/clarification, please contact Telephone Nos. 0177-2830891, 2833587, 2833588. **(Entrance Tests Section)**. Any query related with this entrance examination must be settled by the candidate well before the Entrance examination.

INSTRUCTIONS FOR FILLING BAMS/BHMS ONLINE APPLICATION FORM

A. General

- Please note the Application form Number and Roll No. in your personal record and save it for future reference. All future correspondence will be made using that number only.
- Please note that your name, father's name and date of birth should be exactly the same as in your High school or your first Board/University examination certificate. Any departure may lead to cancellation of your candidature whenever discovered.
- Fee once deposited shall not be refunded under any circumstances.

B. For filling the Online application form column-wise

Please carefully read the instructions given before filling the Online application form:

1. Name of the Candidate:

Write your name in capital letters as given in your original certificate of High School or your first Board/University examination.

2. Father's name (Exactly as per Matric Certificate)

Write your father's name in Capital letters as given in your original certificate of High School or your first Board/University Examination.

3. Sex

Fill-up the required information in the appropriate columns.

4. Date of Birth:

Enter the date, month and year of your birth as per the English calendar and as recorded in your Matriculation Board examination certificate as on 31.12.2016

5. Category

Fill-up the required information in the appropriate columns.

(Do not mention more than one category)

Categories	Code No.
Scheduled Caste	1
Scheduled Tribe	2
Other Backward Classes	3
Children-son/daughter of Ex-servicemen	4
Children-son/daughter of Defence Personnel	5
Wards of Freedom Fighter	6
Backward Area	7
Physically Handicapped	8
General	9

Note (i) Fill-up one category for which he/she is eligible. In case, the category is left blank, he/she shall be treated under General Category.

(ii) The SC/ST/OBC candidates must possess such certificates on lineage of paternal families.

6. Bonafide Himachali/Domicile

Fill-up the required information in the appropriate columns.

7. Mobile No.

Fill-up the required information in the appropriate columns.

8. Email ID

Fill-up the required information in the appropriate columns.

9. Group Applied for (Group-I (H.P. State)/Group-III (All India Quota)

Fill-up the required information in the appropriate columns.

10. Choice of Examination Centre:

Select only one out of four examination centres (i.e. Dharmshala/Hamirpur/Mandi/Shimla)

11. Passed 2 Exam out of 4 (i.e. 5th, 8th, 10th,+1, +2) from the school located in Backward Areas of State of Himachal Pradesh.

Fill-up the required information in the appropriate columns.

12. Have you passed Matric with Sanskrit Subject? (Yes/No)

Fill-up the required information in the appropriate columns.

13. Percentage of Marks obtained in Sanskrit

Fill-up the required information in the appropriate columns.

Note: The candidate who have passed Matric with Sanskrit subject must mentioned percentage of marks obtained in Sanskrit so as to determine his/her inter-se-ranking in case of obtaining equal aggregate marks in the entrance test. If the candidate do not mentioned the Marks obtained in Sanskrit he/she will be ranked in merit list below the candidates who have mentioned the Sanskrit Marks which will be verified at the time of counselling.

14. Passed / Appeared in 10+2 Exam (Passed/ Appeared)

Fill-up the required information in the appropriate columns.

15. If passed, Percentage of marks in 10+2 in Physics, Chemistry & Biology

Fill-up the required information in the appropriate columns.

16. Passed/Appeared in B.Sc. Degree (If applicable) Fill-up the required information in the appropriate columns.

17. Upload your recent colour passport size photograph at the space provided for

18. Fee details

SBI Collect Reference No.

Date:

Amount

19. Contact Details:

Permanent Address

Correspondence Address

20. Declaration by the Candidate:

(i) I Certify that particulars furnished by me as above are correct. In case any of these are found false, my candidature is liable to be cancelled and I shall have no claim for admission to the college on the basis of Entrance Test. I undertake to submit required documents and Form No. 1 with same information at the time of Counselling.

(ii) I also ensure that the Admit Card for appearing in Pre-Medical (Ayurveda) Entrance Test (BAMS/BHMS) – 2016-17 will be downloaded by me from the University Website (www.hpuniv.in) as the same shall not be sent by post by the University.

(Signature of the Parent/ Guardian)

(Signature of the Candidate)

Place & Date:

9.SUBMISSION OF CERTIFICATES/DOCUMENTS WITH ADMISSION FORM.

- a) The following certificates/documents are to be **submitted at the time of counselling/admission** by the candidates separately along with Form No.1.
- A certificate of having passed qualifying examination (10+2 or equivalent) as per eligibility conditions along with detail marks sheet.
 - Matriculation/Higher Secondary part I. Indian school Certificate showing the date of birth. No other certificate in respect of date of birth will be entertained.
 - A certificate of good conduct and character from the Principal of the School/College where the candidate studied last followed by a separate character certificate from the Tehsildar/Sub-Divisional Magistrate of the area concerned.
 - Certificate of passing the Primary, Middle, Matric,+1 and +2 school examinations from the recognized institution showing the place of school located (in case of backward Area category).

- b) The following certificates must be supplied in the form of format given in the prospectus at the time of counselling/admission (these certificates should be of the year of entrance test) :-

- A certificate of being a bonafide resident of Himachal Pradesh from the Sub-Divisional Magistrate/Executive Magistrate/Tehsildar of the area only to which the father/guardian of the candidate belongs as given at **Appendix A-1**

Note: *It should be signed and not countersigned. Permanent address of parents/guardians as shown in the application form would be considered to be the permanent residence of applicant's parent's/guardians.*

- In case of candidate seeking admission against any of the reserved seats i.e. SC/ST/OBC/ Backward Areas/Children of Ex-servicemen/Children of Defence Personnel/Wards of Freedom Fighters/Physically Handicapped, the required certificate(s) of belonging to these categories must be from the competent authority as indicated in the at **Appendix A-2 to A-8 of the prospectus.**
- The SC/ST/OBC candidates must possess such certificates on lineage of paternal families issued from competent authority. The certificate of OBC should be acceptable only if it is issued within six months from the date of production.
- All original certificates will be seen on the date of counselling. No additional time will be given for producing original certificates, to any candidate.
- The candidate who brings incomplete certificates at the time of counselling will be rejected without any notice there and then by the committee constituted for the counselling/admission by the college Principal.

- 3 (a) Candidate(s) while submitting their application(s) online should not forward original/zerox certificates of academic qualifications but must produce them at the time of admission/counselling.
- The application form and the certificate attached therewith will not be returned.
 - The online application form will not be accepted after the specified date.
 - That there will be preliminary scrutiny of the information submitted through online application forms for determining the eligibility as per provisions of the prospectus for taking competitive test and it will be the entire responsibility of the candidate concerned to supply correct and authenticated information while filling-up online application form on the basis of the original certificates. Application forms not accompanied with " Fee Details shall be treated as incomplete and will be summarily rejected without assigning any reasons. It is further clarified that the candidates are allowed to appear in the entrance test provisionally and shall be taking the test at their

own risk and responsibility as far as their final 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/merit or any other consequence emanating from the same. However, the final scrutiny of the application forms will be done at the time of admission/ counselling by the committee or Principal of the colleges concerned before making the admission in the college and any wrong or misleading entry or documentation in the application form will lead to rejection of the candidature of the candidate without assigning any reason.

- (e) Admit card to the competitive examination will only be uploaded provisionally in the University website www.hpuniv.in for downloading the same by the candidates whose application and other required documents/information are found complete in all respect.
- (f) The candidates who have appeared in Plus Two examination or its equivalent examination and the result has not been declared can apply for competitive test, but the admission will be subject to the production of passing plus two examination or its equivalent certificate as per eligibility clause in the prospectus at the time of admission/counselling.
- (g) Roll number to the candidates will be uploaded purely on provisional basis.
- (h) The candidates are advised to visit the **H.P. University website** www.hpuniv.in from time to time for obtaining various information regarding issuance of Roll Numbers, declaration of result/merit in respect of the Entrance Test, counselling etc.
- (i) Examination Centre once opted by the candidate will not be changed. However, University reserves the right to allot any centre in view of exigencies.
- (j) Result and Merit of the competitive test will be uploaded in the **University website** www.hpuniv.in
- (k) The University will draw the merit list category wise as well as Group-wise and send the same to the Principal of the Institute for admission process within the schedule as specified.
- (l) **All disputes are subject to Shimla jurisdiction only.**
- (n) At the time of admission in the college, the candidates have to submit 5 self addressed envelopes having their home address affixing a postal stamp of Rs.6/- p to Fee Clerk of the college so that their academic record could be sent to parents.

10. COUNSELING AND ADMISSION PROCEDURE

1. There will be a counselling system to allot the available seats in order of merit. The admission process will be completed within the specified period by conducting the counselling. The 1st round of counselling for the qualified candidates will be held as per following schedule in the **H.P. University Auditorium, Shimla -171005** in accordance with the category-wise merit list notified by the University and displayed on the University Website "www.hpuniv.in". **The candidates are directed to make themselves present in the counselling accordingly. No separate call letters will be sent to the qualified candidates for attending the counselling. They must bring Application Form No. 1 along with all the required documents and counselling fee of Rs. 100/- in the shape of IPO/Bank Draft in favour of Finance Officer, H.P. University, Shimla-5 payable at Shimla.**
2. The qualified candidates falling in merit and as per details given below should appear before the Counselling Committee as per following Schedule at **Himachal Pradesh University Auditorium, Summer Hill, Shimla-5 (H.P.)** for counselling to BAMS/BHMS Courses .

SCHEDULED FOR BAMS COUNSELING -2016
Venue: H.P. Auditorium, Summer Hill, Shimla-5

Date & Time	Categories	Merit Ranks of Entrance Test-2016
07.09.2016 at 10.30 a.m. Sharp	Group-I & III General Combined merit of all categories (General & reserved)	1 to 150
	(i) Group- I & III SC	1 to 24
	(ii) Group -I & III ST	1 to 15
	(iii) Group –I OBC	1 to 20
	(iv) Group- 1 Backward Area	All Qualified candidates
	(v) Group –I Ch. Of Defence Personal	All Qualified candidates
	(vi) Ch. Of Ex. Serviceman	1 to 5`
	(vii) Ward of freedom fighter	1 to 4
	(viii) Physical Handicapped Category candidates	1 to 4
SCHEDULED FOR BHMS COUNSELING -2016		
Venue: Solan Homoeopathic Medical College & Hospital, Bye-Pass Road, Kumarhatti, Distt. Solan		
10.9.2016 at 10.30 a.m. Sharp	All Qualified interested candidates of Group – I & III (General & reserved) For State / Management Quota Seats	

No separate call letters will be sent to the candidates for attending the Counselling. For any further enquiry regarding Counselling / Admission the candidates should contact the **Principal, Rajiv Gandhi Government Post Graduate Ayurvedic College, Paprola (Distt. Kangra) H.P. on Phone No. : 01894-242064 and Principal, Homeopathic Medical college & Hospital, Bye-Pass Road, Kumarhatti, Distt. Solan(HP) on Phone No 01792-266741 or the Assistant Registrar, (Entrance Tests), H.P. University, Shimla-5 on Phone No. 0177-2830891 and 0177-2833588.**

The candidates must adhere to the above schedule and may report for counseling well in time on the scheduled date with all relevant documents, failing which their candidature will be treated as cancelled. They must bring with Application Form No. 2 along with all the required documents (Original & Attested XEROX Copies) for determining their eligibility by the Counselling Committee. In case of any doubt in this respect may also contact from the Principal, Rajiv Gandhi Government Post Graduate Ayurvedic College, Paprola (Distt. Kangra) H.P. on Phone No. : 01894-242064 or from the Assistant Registrar, (Entrance Tests) on Phone No. 0177-2830891 and 0177-2833588 well before the counseling. If the candidate does not report for counseling the University shall in no way be responsible.

11. MEDICAL EXAMINATION AND REGISTRATION

- 1 The selected candidates will be called for medical examination and verification of documents attached to the original application in the college at their own expenses.
- 2 The students who takes admission in BAMS course should get vaccinated with anti-Hepatitis 'B' vaccine themselves at their own expenses. They are to do so within 6 months from the date of their admission in the course.
- 3 The standard of physical fitness will be as prescribed in **Appendix A-9**. If declared unfit he/she will not be admitted in the college. Prescribed form of physical fitness is available with the college office. Any disability like colour blindness for technical studies and to perform the duty as a physician/surgeon will be considered as medical unfit for admission to BAMS course.

- 4 If the selected candidate does not join the college by the stipulated date and complete the Medical examination etc. as laid down in the prescribed form he/she will not have any claim for the allotted seat which will then be offered to the next candidate in the merit list.
- 5 Every candidate coming from other Universities/Boards for admission to first year BAMS course in the college has to produce an eligibility certificate obtainable from the Himachal Pradesh University/ H.P. Board of School Education like students coming from foreign Universities before admission.
- 6 Soon after the admission in the college, the students will get themselves registered on payment of prescribed fee with the Himachal Pradesh University as required under rules.
- 7 If a candidate is admitted on the basis of statements made in the application form but at a subsequent time if it is, discovered that any of the statement was false, the student shall be removed from the college and all the fees and other dues paid shall be confiscated. Any further action against the candidate and his/her guardian that may be considered suitable may also be taken.

12. MIGRATION

The interested student may refer to the rules of the Himachal Pradesh University and the rules laid down by the Central Council of Indian Medicine from time to time. Only those students can seek migration, who fulfil other eligibility conditions of the Himachal Pradesh University/ Prospectus /CCIM. Bonafide Himachali Students will be given preference for migration from other Ayurvedic Institutions to this college. The migration will be allowed only from CCIM recognized Ayurvedic Institution and BAMS batches. The students may be allowed to take the migration to continue his/her study to another college after passing the first year examination. Failed students transfer and mid-term migration will not be allowed. For migration, the students shall have to obtain the mutual consent of both colleges & universities and will be against the vacant seats after obtaining NOC from CCIM.

13. SYLLABUS FOR BAMS/BHMS COMBINED ENTRANCE TEST

CLASS - XI (BIOLOGY)

- I. **Diversity in Living World**
Diversity of living organisms, Classification of the living organisms (five kingdom classification, major groups and principles of classification within each kingdom). Systematics and binomial System of nomenclature. Salient features of animal (non chordates up to phylum level and chordates up to class level) and plant (major groups; Angiosperms up to subclass) classification. Botanical gardens, herbaria, zoological parks and museums.
- II. **Structural Organization in Animals and Plants**
Tissues in animals and plants. Morphology, anatomy and functions of different parts of flowering plants : Root, stem, leaf, inflorescence, flower, fruit and seed. Morphology, anatomy and functions of different systems of an annelid (earthworm), an insect (cockroach) and an amphibian (frog).
- III. **CELL : Structure and Function**
Cell : Cell wall, cell membrane and cell organelles' (plastids, mitochondria, endoplasmic reticulum, Golgi bodies/ dictyosomes, ribosomes, lysosomes, vacuoles, centrioles) and nuclear organization.
Mitosis, meiosis, cell cycle. Basic chemical constituents of living boides. Structure and functions of carbohydrates, proteins, lipids and nucleic acids. **Enzymes** : types, properties and function.
- IV. **Plant Physiology**
Movement of water, food, nutrients and gases, Plants and Water Mineral nutrition, Respiration, Photosynthesis, Plant growth and development.
- V. **Human Physiology**
Digestion and absorption. Breathing and respiration, Body fluids and circulation. Excretory products and elimination., Locomotion and movement. Control and coordination.

PRESCRIBED BOOKS

Biology : Published by HPBSE Dharamshala

CLASS - XII (BIOLOGY)

I Sexual Reproduction

Pollination and Fertilization in Flowering plants. Development of seeds and fruits. Human reproduction : reproductive system in male and female, menstrual cycle. Production of gametes, fertilization, implantation, embryo development, pregnancy and parturition. Reproductive health- birth control, contraception and sexually transmitted diseases.

II. Genetics and evolution

Mendelian inheritance. Chromosome theory of inheritance, deviations from Mendelian ratio (gene interaction- Incomplete dominance, co-dominance, complementary genes, multiple alleles.) Sex determination in human beings : XX, XY, Linkage and crossing over, Inheritance pattern of haemophilia and blood groups in human beings. DNA : replication, transcription, translation. Gene expression and regulation. Genome and Human Genome Project. DNA fingerprinting. Evolution : Theories and evidences.

III. Biology and Human Welfare

Animal husbandry. Basic concepts of immunology, vaccines. Pathogens, Parasites. Plant breeding, tissue culture, food production. Microbes in household food processing, industrial production, sewage treatment and energy generation. Cancer and AIDS.

Adolescence and drug/alcohol abuse.

IV. Biotechnology and ITS Applications

Recombinant DNA technology. Applications in Health, Agriculture and Industry. Genetically modified (GM) organisms; biosafety issues. Insulin and Bt cotton.

V. Ecology & Environment

Ecosystems : components, types and energy flow. Species, population and community. Ecological adaptations. Centres of diversity and conservation of biodiversity National Parks and sanctuaries, Environmental issues.

BOOKS RECOMMENDED

Biology - Published by N.C.E.R.T. New Delhi

CLASS - XI (CHEMISTRY)

Unit I : Some Basic Concepts of Chemistry.

General Introduction: Importance and scope of chemistry. Historical approach to particulate nature of matter, laws of chemical combination. Dalton's atomic theory : concept of elements, atoms and molecules. Atomic and molecular masses. Mole concept and molar mass: percentage composition, empirical and molecular formula; chemical reactions, stoichiometry and calculations based on stoichiometry.

Unit II : Structure of Atom

Discovery of electron, proton and neutron, atomic number, isotopes and isobars. Thomson's model and its limitations. Rutherford's model and its limitations. Bohr's model and its limitations, concepts of shells and subshells, dual nature of matter and light. De Broglie's relationship, Heisenberg uncertainty principle, concept of orbitals, quantum numbers, shapes of s, p, and d orbitals, rules for filling electrons in orbitals- Aufbau principle, Pauli exclusion principle and Hund's rule, electronic configuration of atoms, stability of half filled and completely filled orbitals.

Unit III : Classification of Elements and Periodicity in Properties

Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table, periodic trends in properties of elements- atomic radii, ionic radii, inert gas radii. Ionization enthalpy, electron gain enthalpy, electro negativity, valence.

Unit IV : Chemical Bonding and Molecular Structure

Valence electrons, ionic bond, covalent bond : bond parameters. Lewis structure ; polar character of covalent bond, covalent character of ionic bond, valence bond theory, resonance, geometry of covalent molecules, VSEPR theory, concept of hybridization, involving s, p, and d orbitals and

shapes of some simple molecules, molecular orbital ; theory of homo nuclear diatomic molecules (qualitative idea only), hydrogen bond.

Unit V : States of Matter: gases and liquids

Three states of matter. Intermolecular interactions, type of bonding, melting and boiling points. Role of gas laws in elucidating the concept of the molecule, Boyle's law. Charles law, Gay Lussac's law, Avogadro's law. Ideal behaviour, empirical derivation of gas equation, Avogadro's number Ideal gas equation. Derivation from ideal behaviour, liquefaction of gases, critical temperature. Liquid State-Vapour pressure, viscosity and surface tension (qualitative idea only, no mathematical derivations).

Unit VI : Thermodynamics

Concepts of System, types of systems, surroundings Work, heat, energy, extensive and intensive properties, state functions.

First law of thermodynamics-internal energy and enthalpy, heat capacity and specific heat, measurement of ΔU and ΔH . Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation. Phase transition, ionization and dilution.

Introduction of entropy as a state function, free energy change for spontaneous and non-spontaneous process, equilibrium.

Unit VII : Equilibrium

Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium-Le Chatelier's principle; ionic equilibrium-ionization of acids and bases, strong and weak electrolytes, degree of ionization, concept of pH. Hydrolysis of salts (elementary idea). Buffer solutions solubility product, common ion effect (with illustrative examples)

Unit VIII : Redox Reactions

Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, applications of redox reactions.

Unit IX : Hydrogen

Position of hydrogen in periodic table, occurrence, isotopes preparation, properties and uses of hydrogen; hydrides-ionic, covalent and interstitial; physical and chemical properties of water, heavy water, hydrogen peroxide-preparation, reactions and structure; hydrogen as a fuel.

Unit X : S-Block Elements (Alkali and Alkali and Alkaline earth metals)

Group 1 and Group-2 elements

General introduction, electronic configuration, occurrence, anomalous properties of the first element of each group, diagonal relationship, trends in the variation of properties (such as ionization enthalpy, atomic and ionic radii), trends in chemical reactivity with oxygen, water, hydrogen and halogens; uses.

Preparation and properties of some important compounds:

Sodium carbonate, sodium chloride, sodium hydroxide and sodium hydrogen carbonate, biological importance of sodium and potassium.

CaO , CaCO_3 and industrial use of lime and limestone; biological importance of Mg and Ca.

Unit XI : Some P-Block Elements

General Introduction to P-Block Elements

Group 13 elements: General introduction, electronic configuration, occurrence. Variation of properties, oxidation states, trends in chemical reactivity, anomalous properties of first element of the group; boron-physical and chemical properties, some important compounds : borax, boric acids, boron hydrides. Aluminium : uses, reactions with acids and alkalies.

Group 14 elements: General introduction, electronic configuration, occurrence, variation of properties, oxidation states, trends in chemical reactivity, anomalous behaviour of first element, Carbon-catenation, allotropic forms, physical and chemical properties ; uses of some important compounds : oxides. Important compounds of silicon and a few uses: silicon tetrachloride, silicones, silicates and zeolites.

Unit XII : Organic Chemistry-Some Basic Principles and Techniques

General introduction, method, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds.

Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation.

Homolytic and heterolytic fission of a covalent bond : free radicals, carbocations, carbanions; electrophiles and nucleophiles, types of organic reactions.

Unit XIII : Hydrocarbons

Classification of Hydrocarbons

Alkanes-Nomenclature, isomerism, conformations (ethane only), physical properties, chemical reactions including free radical mechanism or halogenation, combustion and pyrolysis.

Alkenes- Nomenclature, structure of double bond (ethane) geometrical isomerism, physical properties, methods of preparation; chemical reactions: addition of hydrogen, halogen, water hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition.

Alkenes - Nomenclature, structure of triple bond (ethyne), physical properties. Methods of preparation, chemical reactions : acidic character of alkynes, addition reaction of hydrogen, halogens, hydrogen halides and water.

Aromatic hydrocarbons: Introduction, IUPAC nomenclature; Benzene: resonance aromaticity; chemical properties; mechanism of electrophilic substitution - nitration sulphonation, halogenation, Friedel Craft's alkylation and acylation: directive influence of functional group in mono-substituted benzene; carcinogenicity and toxicity.

Unit XIV : Environmental Chemistry

Environmental pollution-air, water and soil pollution, chemical reactions in atmosphere smog, major atmospheric pollutants; acid rain, ozone and its reactions, effects of depletion of ozone layer, greenhouse effect and global warming-pollution due to industrial wastes; green chemistry as an alternative tool for reducing pollution, strategy for control of environmental pollution.

PRESCRIBED BOOKS

Chemistry - I : Published by HPBSE, Dharamshala

Chemistry - II : Published by HPBSE, Dharamshala

CLASS - XII (CHEMISTRY)

Unit I : Solid State

Classification of solid based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea), unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids, voids, number of atoms per unit cell in a cubic unit cell, point defects, electrical and magnetic properties.

Unit II : Solutions

Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties- relative lowering of vapour pressure, elevation of B.P. depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass.

Unit III : Electrochemistry

Redox reactions, conductance in electrolytic solutions, specific and molar conductivity variations of conductivity with concentration, Kohlrausch's Law, electrolysis and laws of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells; lead accumulator, EMF of a cell standard electrode potential, Nernst equation and its application to chemical cells, fuel cells; corrosion.

Unit IV : Chemical Kinetics

Rate of a reaction (average and instantaneous), factors affecting rates of reaction; concentration, temperature, catalyst; order and molecularity of a reaction; rate law and specific rate constant, integrated rate equations and half life (only for zero and first order reactions); concept of collision theory (elementary idea, no mathematical treatment)

Unit V : Surface Chemistry

Adsorption-physisorption and chemisorption factors affecting adsorption of gases of solids; catalysis: homogenous and heterogeneous activity and selectivity; enzyme catalysis; colloidal state: distinction between true solutions colloids and suspensions; lyophilic, lyophobic multimolecular, and macromolecular colloids; properties of colloids, Tyndall effect, Brownian movement, electrophoresis, coagulation, emulsion - types of emulsions.

Unit VI : General Principles and Processes of Isolation of Elements

Principles and methods of extraction - concentration, oxidation, reduction electrolytic method and refining; occurrence and principles of extraction of aluminium, copper, zinc and Iron.

Unit VII : p-Block Elements

Group 15 Elements: General introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical properties; nitrogen- preparation, properties and uses; compounds of nitrogen; preparation, properties of ammonia and nitric acid, oxides of nitrogen (structure only); Phosphorous-allotropic forms; compounds of phosphorous: preparation and properties of phosphine, halides (PCl₃, PCl₅) and oxoacids (elementary idea only)

Group 16 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; dioxygen: preparation, properties and uses; simple oxides; Ozone. Sulphur-allotropic forms; compounds of sulphur: preparation, properties and uses of sulphur dioxide; sulphuric acid: industrial process of manufacture, properties and uses, oxoacids of sulphur (structures only).

Group 17 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens: Preparation, properties and uses of chlorine and hydrochloric acid, interhalogen compounds, oxoacids of halogens (structure only)

Group 18 Elements: General introduction, electronic configuration. Occurrence, trends in physical and chemical properties, uses.

Unit VIII : d and f-Block Elements

General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals-metallic character, ionization enthalpy, oxidation states, ionic radii, colour catalytic property, magnetic properties, interstitial compounds, alloy formation. Preparation and properties of K₂Cr₂O₇ and KMnO₄.

Lanthanoids - Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction.

Actinoids- Electronic configuration, oxidation states.

Unit IX : Coordination Compounds

Coordination Compounds - introduction, ligands and coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding; isomerism, importance of coordination compounds (in qualitative analysis extraction of metals and biological systems).

Unit X : Haloalkanes and Haloarenes.**Haloalkanes :**

Nomenclature, nature of C-X bond, physical and chemical properties, mechanisms of substitution reactions.

Haloarenes :

Nature of C-X bond, substitution reactions (directive influence of halogen for monosubstituted compounds only)

Uses and environmental effects of -dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

Unit XI : Alcohols, Phenols and Ethers

Alcohols : Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only); identification of primary, secondary and tertiary alcohols; mechanism of dehydration, uses, some important compounds-methanol and ethanol.

Phenols : Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols

Ethers : Nomenclature, methods of preparation, physical and chemical properties, uses.

Unit XII : Aldehydes, Ketones and Carboxylic Acids

Aldehydes and Ketones : Nomenclature, nature of carbonyl group methods of preparation, physical and chemical properties and mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes; uses.

Carboxylic Acids : Nomenclature, acidic nature, methods of preparation physical and chemical properties; uses.

Unit XIII : Organic Compounds containing Nitrogen

Amines : Nomenclature, classification, structure, methods of preparation physical and chemical properties, uses. identification of primary, secondary and tertiary amines.

Cyanides and Isocyanides: will be mentioned at relevant places context.

Diazonium salts : Preparation, chemical reactions and importance synthetic organic chemistry.

Unit XIV : Biomolecules

Carbohydrates: Classification, (aldoses and ketoses) monosaccharides, (glucose and fructose), oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); importance.

Proteins : Elementary idea of α -amino acids: peptide bond, polypeptides, proteins, primary structure, secondary structure, tertiary structures and quaternary structure (qualitative idea only), denaturation of proteins; enzymes.

Vitamins : Classification and functions

Nucleic Acids : DNA & RNA.

Unit XV : Polymers

Classification: natural and synthetic, methods of polymerization (addition and condensation), copolymerization. Some important polymers: natural and synthetic like polythene, nylon, polyesters, bakelite, rubber.

Unit XVI : Chemistry in Everyday Life

1. **Chemicals in medicines**: analgesics, tranquilizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamines.
2. **Chemicals in food** : preservatives, artificial sweetening agents.
3. **Cleansing agents**: soaps and detergents, cleansing action.

BOOKS RECOMMENDED

Chemistry Part - I : Published by N.C.E.R.T. New Delhi

Chemistry Part - II : Published by N.C.E.R.T. New Delhi

CLASS - XI (PHYSICS)

UNIT-I : PHYSICAL WORLD AND MEASUREMENT

Physics-scope and excitement; nature of physical laws; Physics, technology and society.

Need or measurement: Units of measurement; systems of units; SI units, fundamental and derived units. Length, mass and time measurements; accuracy and precision of measuring instruments; errors in measurement; significant figures.

Dimensions of physical quantities, dimensional analysis and its applications.

UNIT-II : KINEMATICS

Frame of reference. Motion in a straight line : Position-time graph, speed and velocity. Uniform and non-uniform motion, average speed and instantaneous velocity.

Uniformly accelerated motion, velocity-time, position-time graphs, relations for uniformly accelerated motion (graphical treatment).

Elementary concepts of differentiation and integration for describing motion.

Scalar and vector quantities: Position and displacement vectors, general vectors and notation, equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, Relative velocity.

Unit vector; Resolution of a vector in a plane-rectangular components. Motion in a plane. Cases of uniform velocity and uniform acceleration-projectile motion. Uniform circular motion.

UNIT-III : LAWS OF MOTION

Intuitive concept of force. 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. Static and kinetic friction, laws of friction, rolling friction.

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

UNIT-IV : WORK, ENERGY AND POWER

Scalar product of vectors. Work done by a constant force and a variable force; kinetic energy, work-energy theorem, power

Notion of potential energy, potential energy of a spring, conservative

forces : conservation of mechanical energy (kinetic and potential energies); non-conservative forces : elastic and inelastic collisions in one and two dimensions.

UNIT-V : MOTION OF SYSTEM OF PARTICLES AND RIGID BODY

Centre of mass of a two-particle system, momentum conservation and centre of mass motion. Centre of mass of a rigid body; centre of mass of uniform rod.

Vector product of vectors; moment of a force, torque, angular momentum, conservation of angular momentum with some examples.

Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions, moment of inertia, radius of gyration. Values of moments of inertia for simple geometrical objects (no derivation). Statement of parallel and perpendicular axes theorems and their applications.

UNIT-VI : GRAVITATION

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

UNIT-VII : PROPERTIES OF BULK MATTER

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). Effect of gravity on fluid pressure.

Viscosity, Stokes' law, terminal velocity, Reynold's number, streamline and turbulent flow. Bernoulli's theorem and its applications.

Surface energy and surface tension, angle of contact, application 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, thermal conductivity, Newton's law of cooling.

Unit VIII: Thermodynamics

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.

Unit IX : Behaviour of Perfect Gas and Kinetic Theory

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 application to specific heats of gases; concept of mean free path, Avogadro's number.

Unit X : Oscillations and Waves

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 (qualitative ideas only), resonance.

Wave motion, Longitudinal and transverse waves, speed of wave motion. 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.

PRESCRIBED BOOKS

Physics - I : Published by HPBSE, Dharamshala

Physics - II : Published by HPBSE, Dharamshala

Class - XII (Physics)**UNIT I : Electrostatics**

Electric Charges : Conservation of charge, Coulomb's law-force 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, potential difference, 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, free charges and bound charges inside a conductor; Dielectrics and, electric polarization, capacitor and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates; energy stored in a capacitor. Van de Graaff generator.

UNIT II : Current Electricity

Electric current, flow of electric charges in a metallic conductor, drift velocity and mobility and their relation with electric current; Ohm's law, electrical resistance, V-I characteristics. (linear and non-linear) electrical energy and power, electrical resistivity and conductivity, Carbon resistors, colour code for carbon resistors; series and parallel combinations of 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.

Kichhoff's laws and simple applications, Wheatstone bridge, Metre bridge.

Potentiometer - Principle and its applications to measure potential difference, and for comparing emf of two cells; measurement of internal resistance of a cell.

UNIT III : Magnetic Effect of Current and Magnetism**Concept of magnetic field. Oersted's experiment.**

Biot-Savart law, and its application to current carrying circular loop.

Ampere's law and its applications to infinitely long straight wire, straight and toroidal solenoids.

Force on a 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 to ammeter and voltmeter.

Current loop as a magnetic dipole and its magnetic dipole moment; Magnetic dipole moment of a revolving electron; Magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis. Torque on a magnetic dipole (bar magnet) in a uniform magnetic field; bar magnet as an equivalent solenoid, magnetic field lines; Earth's magnetic field and magnetic elements; Para, dia and ferro-magnetic substances with examples, Electromagnets and factors affecting their strengths Permanent magnets.

UNIT IV : Electromagnetic Induction and Alternating Current

Electromagnetic induction, Faraday's laws, Induced emf and current, Lenz's law, Eddy currents, Self and mutual inductance.

Need for displacement current.

Alternating currents, peak and rms value of alternating current/voltage, reactance and impedance; LC oscillations, (qualitative treatment only), LCR series circuit, resonance; Power in AC circuits, wattless current.

AC generator and transformer.

UNIT V : Electromagnetic Waves

Electromagnetic waves and their characteristics (qualitative ideas only); Transverse nature of electromagnetic waves.

Electromagnetic spectrum (radiowaves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.

UNIT VI: Optics

Reflection of light, spherical mirrors, mirror formula. Refraction of light, total internal reflection and its applications, optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lens-maker's formula. Magnification, power of a lens, combination of thin lenses in contact. Refraction and dispersion of light through a prism.

Scattering of light - blue colour of the sky and reddish appearance of the sun at sun rise and sunset.

Optical instruments - Human eye, image formation and accommodation, correction of eye defects (myopia, hypermetropia, presbyopia and astigmatism) using lenses. Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.

Wave Optics : Wave front and Huygen's principle; reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygens' principle. Interference - 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 polarised light and Polaroids.

Unit VII : Dual Nature of Matter and Radiation

Dual nature of radiation. Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light.

Matter waves - wave nature of particles, de-Broglie relation, Davisson-Germer experiment.

Unit VIII : Atomic & Nuclei

Alpha-particle scattering experiment, Rutherford's model of atom ; Bohr model, 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 IX : Electronic Devices

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, transistor action, characteristics of a transistor; transistor as an amplifier (common emitter configuration) and oscillator; Logic gates (OR, AND, NOT, NAND and NOR); Transistor as a switch.

Unit X : Communication Systems

Elements of a communication systems (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.

BOOKS RECOMMENDED

Physics Part - I : Published by N.C.E.R.T. New Delhi

Physics Part - II : Published by N.C.E.R.T. New Delhi

Additions & Deletions in the Prescribed Syllabus

BIOLOGY

Class-XII

Unit 14 : Biomolecules

14.5 Hormones

Hormones are molecules that act as intercellular messengers. These are produced by endocrine glands in the body and are poured directly in the blood stream which transports them to the site of action.

In terms of chemical nature, some of these are steroids, e.g., estrogens and androgens; some like insulin and endorphins are poly peptides, and amino acid derivatives such as epinephrine and norepinephrine.

Hormones have several functions in the body. They help to maintain the balance of biological activities in the body. The role of insulin in keeping the blood glucose level within the narrow limit is an example of this function. Insulin is released in response to the rapid rise in blood glucose level. On the other hand hormone glucagon tends to increase the glucose level in the blood. The two hormones together regulate the glucose level in the blood. Epinephrine and norepinephrine mediate responses to external stimuli. Growth hormones and sex hormones play role in growth and development. Thyroxine produced in the thyroid gland is an iodinated derivative of amino acid tyrosine. Abnormally low level of thyroxine leads to hypothyroidism which is characterized by lethargy and obesity. Increased level of thyroxine causes hyperthyroidism. Low level of iodine in the diet may lead to hypothyroidism and enlargement of the thyroid gland. This condition is largely being controlled by adding sodium iodide to commercial table salt ("Iodised" salt).

Steroid hormones are produced by adrenal cortex and gonads (testes in male and ovaries in females). Hormones released by the adrenal cortex play very important role in the functions of the body. For example glucocorticoids control the carbohydrate metabolism, modulate inflammatory reactions, and are involved in reactions to stress. The mineralocorticoids control the level of excretion of water and salt by the kidney. If adrenal cortex does not function properly then one of the results may be Addison's disease characterized by hypoglycemia, weakness and increased susceptibility to stress. The disease is fatal unless it is treated by glucocorticoids and mineralocorticoids. Hormones released by gonads are responsible for development of secondary sex characters. Testosterone is the major sex hormone produced in males. It is responsible for development of secondary male characteristics (deep voice, facial hair, general physical constitution) and estradiol is the main female sex hormone. It is responsible for development of secondary female characteristics and participates in the control of menstrual cycle. Progesterone is responsible for preparing the uterus for implantation of fertilized egg.

Unit 16 : Chemistry in Every Day Life

16.4.3 Antioxidants in Food

These are important and necessary food additives. These help in food preservation by retarding the action of oxygen on food. These are more reactive towards oxygen than the food material they are protecting. The two most familiar antioxidants are butylated hydroxyl toluene (BHT) and butylated hydroxyl anisole (BHA). The addition of BHA to butter increases its shelf life from months to years.

Some times BHT and BHA along with citric acid are added to produce more effect. Sulphur dioxide and sulphite are useful antioxidants for wine and beer, sugar syrups and cut peeled or dried fruits and vegetables.

CLASS XI

Unit 1 : Chapter 2, Pg. 17 along with 1st para after the sixth line

Three domain of life

The three domain system has also been proposed that divides the Kingdom Monera into two domains, leaving the remaining eukaryotic kingdoms in the third domain and there by a six kingdom classification. You will learn about this system in detail at higher classes.

Unit 1 : Chapter 3, pg. 40, after eight line

Classification of angiosperms upto class and their characteristic features

The dicotyledons are characterized by seeds having two cotyledons, reticulate venations in leaves and tetramerous or pentamerous flowers i.e. having four or five members in each floral whorls. The monocotyledons on the other hand are characterized by single cotyledonous seeds, parallel venation in leaves, and trimerous flowers having three members in each floral whorls.

Unit IV : Chapter 13, Pg. 206 along with 1st para after the fourth line

Photosynthesis as a means of Autotrophic nutrition

The green plants make or rather synthesise the food they need by Photosynthesis and therefore called autotrophs. You have already learnt that the autotrophic nutrition is found only in plants and all other organisms that depend on the green plants for food are heterotrophs.

Unit IV : Chapter 15, Pg. 239 along with 1st para after the last line.

Seed germination

The first step in the process of plant growth is seed germination. The seed germinates when favourable conditions for growth exist in the environment. In absence of such favourable conditions the seeds do not germinate and goes into a period of suspended growth or rest. Once favourable conditions return the seeds resume metabolic activities and growth take place.

Unit IV : Chapter 15, Pg. 252 as section 15.7

Seed dormancy

There are certain seeds which fail to germinate even when external conditions are favourable. Such seeds are understood to be undergoing a period of dormancy which is controlled not by external environment but are under endogenous control or conditions within the seed itself. Impermeable and hard seed coat; presence of chemical inhibitors such as abscissic acids, phenolic acids, para-ascorbic acid; and immature embryos are some of the reasons which causes seed dormancy. This dormancy however can be overcome through natural means and various other man made measure. For e.g. the seed coat barrier in some seeds can be broken by mechanical abrasions using knives, sandpaper etc. or vigorous shaking. In nature, these abrasions are caused by microbial action and passage through digestive tract of animals. Effect of inhibitory substances can be removed by subjecting the seeds to chilling condition or by application of certain chemicals like gibberellic acid and nitrates. Changing the environmental conditions, such as light and temperature are other methods to overcome seed dormancy.

Unit V : Chapter 16; 16.2 Pg. 264 (before 16.3 absorption of digested product)

Calorific value of Protein, Carbohydrate and Fat (Not for evaluation Box item)

The energy requirements of animals, and the energy content of food, are expressed in terms of measure of heat energy because heat is the ultimate form of all energies. This is often measured to as calorie (cal) or joule (j), which is the amount of heat energy required to raise the temperature of 1 g of water by 1°C. Since this value is tiny amount of energy, physiologists commonly use kilocalorie (kcal) or kilojoule (kj). One kilocalorie is the amount of energy required to raise the temperature of 1 kg. of water through 1°C. Nutritionists, traditionally refer to kcal as the Calorie or Joule (always capitalized). The amount of heat liberated from complete combustion of 1 g food in a bomb calorimeter (a closed metal chamber filled with O₂) is its gross calorific or gross energy value. The actual amount of energy combustion of 1 g of food is the physiologic value of food. Gross calorific values of carbohydrates, proteins and fats are 4.1 kcal/g, 5.65 kcal/g and 9.45 kcal/g, respectively, whereas their physiologic values are 4.0 kcal/g, 4.0 kcal/g and 9.0 kcal/g, respectively.

Unit V : Chapter 16; 16.4 Pg. 266 after Indigestion

PEM

Dietary deficiencies of proteins and total food calories are widespread in many underdeveloped countries of South and South-east Asia, South America and West and Central Africa. Protein-energy

malnutrition (PEM) may affect large sections of the population during drought, famine and political turmoil. This happened in Bangladesh during the liberation war and in Ethiopia during the severe drought in mid-eighties. PEM affects infants and children to produce Marasmus and Kwashiorkor.

Marasmus is produced by a simultaneous deficiency of proteins and calories. It is found in infants less than a year in age, if mother's milk is replaced too early by other foods which are poor in both proteins and caloric value. This often happens if the mother has second pregnancy or childbirth when the older infant is still too young. In Marasmus, protein deficiency impairs growth and replacement of tissue proteins; extreme emaciation of the body and thinning of limbs results, the skin becomes dry, thin and wrinkled. Growth rate and body weight decline considerably. Even growth and development of brain and mental facilities are impaired.

Kwashiorkor is produced by protein deficiency unaccompanied by calorie deficiency. It results from the replacement of mother's milk by a high calorie-low protein diet in a child more than one year in age. Like marasmus, kwashiorkor shows wasting of muscles, thinning of limbs, failure of growth and brain development. But unlike, marasmus, some fat is still left under the skin, moreover, extensive oedema and swelling of body parts are seen.

Unit V : Chapter 18; 18.3.1 Pg. 284 (before 18.3.2 cardiac cycle)

The blood flows strictly by a fixed route through Blood Vessels, the arteries and veins. Basically, each artery and vein consists of three layers; an inner lining of squamous endothelium, the tunica intima, a middle layer of smooth muscle and elastic fibres, the tunica media, and an external layer of fibrous connective tissue with collagen fibres, the tunica externa. The tunica media is comparatively thin in the veins (Figure 18.4)

Unit V : Chapter 19; 19.8 Pg. 298 in 4th line

During the process of hemodialysis, the blood drained from a convenient artery is pumped into a dialyzing unit called artificial kidney.

Unit V : Chapter 20; 20.1 Pg. 303 in the beginning of 2nd para

You have studied in chapter 8 that the cilia and flagella are the outgrowths of the cell membrane. Flagellar movement helps in the swimming of spermatozoa, maintenance of water current in the canal system of sponges and in locomotion of Protozoans like Euglena.

Unit V : Chapter 21; 21.2 Pg. 316 after parasympathetic neural system

Visceral nervous system is the part of the peripheral nervous system that comprises the whole complex of nerves, fibers, ganglia and plexuses by which impulses travel from the central nervous system to the viscera and from the viscera to the central nervous system.

Unit V Chapter 21; 21.6 Pg. 322 at the end

Sense Organs

We smell things by our nose, taste by tongue, hear by ear and see objects by eyes.

The nose contains mucus coated receptors which are specialized for receiving the sense of smell and called olfactory receptors. These are made up of olfactory epithelium that consists of three kinds of cells. The Neurons of the olfactory epithelium extend from the outside environment directly into a pair of broad bean-sized organs, called olfactory bulb, which are extensions of the brain's limbic system.

Both nose and tongue detect dissolved chemicals. The chemical senses of gustation (taste) and olfactory (smell) are functionally similar and interrelated. The tongue detects tastes through taste buds, containing gustatory receptors. With each taste of food or sip of drink, the brain integrates the differential input from the taste buds and a complex flavor is perceived.

Unit V : Chapter 22; 22.2.2 Pg. 333 along with 1st para after (ADH)

An impairment affecting synthesis or release of ADH results in a diminished ability of the kidney to conserve water leading to water loss and dehydration this disease is known as Diabetes Insipidus.

Unit V : Chapter 22; 22.2.4 Pg. 333 at the end along with last line

Exophthalmic goitre is a form of hyperthyroidism, characterized by enlargement of the thyroid gland, protrusion of the eyeballs, increased basal metabolic rate, and weight loss, also called Graves' disease.

Unit V : Chapter 22; 22.2.7 Pg. 336 at the end of 1st Para

Underproduction of hormones by the adrenal cortex alters carbohydrate metabolism causing acute weakness and fatigue leading to a disease called Addison's disease.

Unit V : Chapter 22; 22.2.2 Pg. 332 2nd para in 3rd line after dwarfism

Excess secretion of growth hormone in adults especially in middle age can result in server disfigurement (especially of the face) called Acromegaly, this may leads to serious complicating conditions and premature death if unchecked. The disease is hard to diagnose in the early stages and is frequently missed for many years, until changes in external feature, becomes noticeable.

Deletions, Changes in the name of Chapter/Theme, Shifting of text matter

Biology Text Book Class XI and XII

Class XI

To Delete

Unit II : Structural organization in Animals and Plants

Chapter 7 Structural Organisation in Animala

To be Deleted 7.3 Earthworm from page 106 up to page 111 1st Para and 7.5 FROGS from page 116 up to page 120 1st Para.

Unit III : Cell Structure and Function

Chapter 9 BIOMOLECULES

To be Deleted inhibition on page 158 2nd and 3rd Para.

To Change Chapter/Theme Title

Chapter title Photosynthesis in Higher Plants to be changed as hotosynthesis

Chapter title Chemical coordination and integration to be changed as Chemical Coordination and Regulation

Name of the Theme 16.4 on page 265 to be changed as Nutritional and Digestive Disorders.

To Shift

In chapter 12 Mineral Nutrition, Theme 12.1 from page 194 up to page 195 1st Para will be deleted and shifted on page 200 just before Theme 12.6 and then Theme numbering will be accordingly rearranged.

CHEMISTRY

Class XI

States of Matter

5.7 Kinetic Energy and Molecular Speeds

Molecules of gases remain in continuous motion. While moving they collide with each other and with the walls of the container. This results in change of their speed and redistribution of energy. So the speed and energy of all the molecules of the gas at any instant is not the same. Thus, we can obtain only average value of speed of molecules. If there are n number of molecules in a sample and their individual speeds are $u_1, u_2, u_3, \dots, u_n$ then average speed of molecules u_{av} can be calculated as follows:-

$$u_{av} = \frac{u_1 + u_2 + \dots + u_n}{n}$$

Maxwell and Boltzmann have shown that actual distribution of molecular speeds depends on temperature and molecular mass of a gas. Maxwell derived a formula for calculating the number of molecules possessing a particular speed. Fig. A(1) shows schematic plot of number of molecules vs. molecular speed at two different temperatures T_1 and T_2 (Temperature T_2 is higher than temperature T_1). The distribution of speeds shown in the plot is called Maxwell-Boltzmann distribution of speeds.

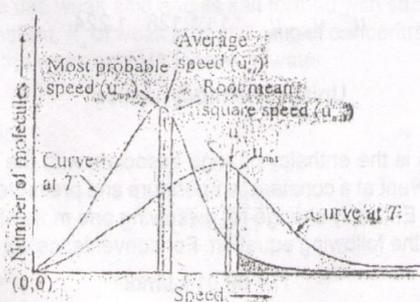


Fig. A (1) Maxwell-Boltzmann distribution of speeds

The graph shows that number of molecules possessing very high and very low speed is very small. Maximum in the curve represents speed possessed by maximum number of molecules. This speed is called most probable speed, u_{mp} . This is very close to the average speed of the molecules. On increasing the temperature most probable speed increase. Also, speed distribution curve broadens at higher temperature. Broadening of curve shows that number of molecules moving at higher speed increases. Speed distribution also depends upon mass of molecules. At the same temperature, gas molecules with heavier mass have slower speed than lighter gas molecules. For example, at the same temperature lighter nitrogen molecules move faster than heavier chlorine molecules. Hence, at any given temperature, nitrogen molecules have higher value of most probable speed than the chlorine molecules. See the molecular speed distribution curve of chlorine and nitrogen given in Fig A(2). Though at a particular temperature

the individual speed of molecules keeps changing, the distribution of speeds remains same.

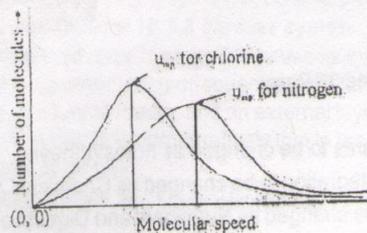


Fig. (A)2 : Distribution of molecular speeds for chlorine and nitrogen at 300 K
We know that kinetic energy of a particle is given by the expression

$$\text{Kinetic Energy} = \frac{1}{2} m u^2$$

Therefore if we want to know average translation kinetic energy, $\frac{1}{2} m u^2$, for movement of a gas particle in a straight line, we require the value of mean of square of speeds, u^2 , of all molecules. This is represented as follows:

$$u^2 = \frac{u_1^2 + u_2^2 + \dots + u_n^2}{n}$$

The mean square speed is the direct measure of the average kinetic energy of gas molecules. If we take the square root of the mean of the square of speeds then we get a value of speed which is different from most probable speed and average speed. This speed is called root mean square speed and is given by the expression as follows:

$$u_{rms} = \sqrt{u^2}$$

Root mean square speed, average speed and the most probable speed have following relationship;

$$u_{rms} > u_{av} > u_{mp}$$

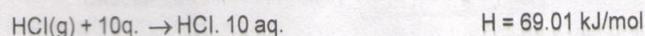
The ratio between the three speeds is given below:

$$u_{mp} : u_{av} : u_{rms} = 1 : 1.128 : 1.224$$

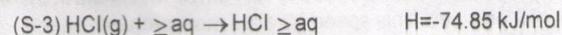
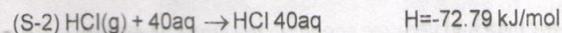
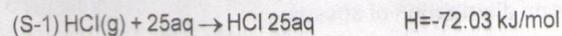
Unit 6: Thermodynamics

6.5(e) Enthalpy of Dilution

It is known that enthalpy of solution is the enthalpy change associated with the addition of a specified amount of solute to the specified amount of solvent at a constant temperature and pressure. This argument can be applied to any solvent with slight modification. Enthalpy change for dissolving one mole of gaseous hydrogen chloride in 10 mol of water can be represented by the following equation. For convenience we will use the symbol Aq. for water.

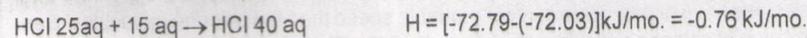


Let us consider the following set of enthalpy changes:



The values of H show general dependence of the enthalpy of solution on amount of solvent. As more and more solvent is used, the enthalpy of solution approaches a limiting value, i.e. the value in infinitely dilute solution. For hydrochloric acid this value of H in equation (S-3) written above.

If we subtract the first equation from the second equation in the above set of equations, we obtain



The value of H is enthalpy of dilution, the heat withdrawn from the surroundings when additional solvent is added to the solution. The enthalpy of dilution of a solution is dependent on the original concentration of the solution and the amount of solvent added.

6.6(c) Entropy and Second Law of Thermodynamics

We know that for an isolated system the change in energy remains constant. Therefore, increase in entropy in such systems is the natural direction of a spontaneous change. This, in fact is the second law of thermodynamics. Like first law of thermodynamics, second law can also be stated in several ways. The second law of thermodynamics explains why spontaneous exothermic reactions are so common. In exothermic reactions heat released by the reaction increases the disorder of the surroundings and overall entropy change is positive which makes the reaction spontaneous.

6.6(d) Absolute Entropy and Third law of Thermodynamics

Molecules of a substance may move in a straight line in any direction, they may spin like a top and the bonds in the molecules may stretch and compress. These motions of the molecule are called translational, rotational and vibrational motion respectively. When temperature of the system rise these motions become more vigorous and entropy increases. On the other hand when temperature is lowered, the entropy decreases. The entropy of any pure crystalline substance approaches zero as the temperature approaches absolute zero. This is called third law of thermodynamics. This is so because there is perfect order in a crystal at absolute zero. The statement is confined to pure crystalline solids because theoretical arguments and practical evidences have shown that entropy of solutions and super cooled liquids is not zero at 0 K. The importance of the third law lies in the fact that it permits the calculation of absolute values of entropy of pure substance from thermal data alone. For a pure substance, this can

be done by summing $\frac{q_{rev}}{T}$ increments from 0K to 298K. Standard entropies can be used to calculate standard entropy changes by a Hess's law type of calculation.

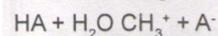
Unit 7 : Equilibrium

7.12.1. Designing Buffer Solution

Knowledge of pK_a , pK_b and equilibrium constant help us to prepare the buffer solution of known pH. Let us see how we can do this.

Preparation of acidic buffer

To prepare a buffer of acidic Ph we use weak acid and its salt formed with strong base. We develop the equation relating the pH, the equilibrium constant, K_a of weak acid and ratio of concentration of weak acid and its conjugate base. For the general case where the weak acid HA ionizes in water



For which we can write the expression -

$$K_a = \frac{[H_3O^+][A^-]}{[HA]}$$

Rearranging the expression we have,

$$[H_3O^+] = K_a \frac{[HA]}{[A^-]}$$

Taking logarithm on both the sides and rearranging the terms we get

$$pK_a = pH - \log \frac{[A^-]}{[HA]}$$

or

$$pH = pK_a + \log \frac{[A^-]}{[HA]}$$

(A-1)

$$pH = pK_a + \log \frac{[\text{Conjugate base, } A^-]}{[\text{Acid, HA}]} \quad (\text{A-2})$$

The expression (A-2) is known as Henderson – Hasselbalch equation. The quantity $\frac{[A^-]}{[HA]}$ is the ratio of concentration of conjugate base (anion) of the acid and the acid present in the mixture. Since acid is a weak acid, it ionizes to a very little extent and concentration of [HA] is negligibly different from concentration of acid taken to form buffer. Also, most of the conjugate base, [A⁻], comes from the ionization of salt of the acid. Therefore the concentration of conjugate base will be negligibly different from the concentration of salt. Thus, equation (a-2) takes the form :

$$pH = pK_a + \log \frac{[\text{Salt}]}{[\text{Acid}]}$$

In the equation (a-1), if the concentration of [A⁻] is equal to the concentration of [HA] then pH = pK_a because value of log 1 is zero. Thus if we take molar concentration of acid and salt (conjugate base) same, the pH of the buffer solution will be equal to the pK_a of the acid. So for preparing the buffer solution of the required pH we select the acid whose pK_a is close to the required pH. For acetic acid pK_a value is 4.76, therefore pH of the buffer solution formed by acetic acid and sodium acetate taken in equal molar concentration will be around 4.76.

A similar analysis of a buffer made with a weak base and its conjugate acid leads to the result,

$$pOH = pK_b + \log \frac{[\text{Conjugate acid, } BH^+]}{[\text{Base, B}]}$$

pH of the buffer solution can be calculated by using the equation pH + pOH = 14. We know that pH + pOH = pK_w and pK_w and pK_a + pK_b = pK_w. On putting these values in equation (a-3) it takes the form as follows :

$$pK_w - pH = pK_w = pK_b + \log \frac{[\text{Conjugate acid, } BH^+]}{[\text{Base, B}]}$$

$$\text{Or } pH = pK_b + \log \frac{[\text{Conjugate acid } BH^+]}{[\text{Base, B}]}$$

If Molar concentration of base and its conjugate acid (cation) is same then pH of the buffer solution will be same as pK_b for the base pK_b value for ammonia is 9.25, therefore a buffer of pH close to 9.25; therefore a buffer of pH close to 9.25 can be obtained by taking ammonia solution and ammonium chloride solution of equal molar concentration. For a buffer solution formed by ammonium chloride and ammonium hydroxide, equation (A-4) becomes;

$$pH = 9.25 + \log \frac{[\text{Conjugate acid, } BH^+]}{[\text{Base, B}]}$$

pH of the buffer solution is not affected by dilution because ratio under the logarithmic term remains unchanged.

PHYSICS
Class XI, Part-2
Chapter 9

9.6.5 Poisson's Ratio

Careful observations with the Young's modulus experiment (explained in section 9.6.2), show that there is also a slight reduction in the cross-section (or in the diameter of wire). The strain perpendicular to the applied force is called lateral strain. Simon Poisson pointed out that within the elastic limit; lateral strain is directly proportional to the longitudinal strain. The ratio of the lateral strain to the longitudinal strain in a stretched wire is called Poisson's ratio. If the original diameter of the wire is d and the contraction of the diameter under stress is Δd , the lateral strain is $\Delta d/d$. If the original length of the wire is L and the elongation under stress is ΔL , the longitudinal strain is $\Delta L/L$. Poisson's ratio is then $(\Delta d/d)/(\Delta L/L)$ or $(\Delta d/\Delta L)(L/d)$. Poisson's ratio is a ratio of two strains; it is a pure number and has no dimensions or units. Its value depends only on the nature of material. For steels the value is between 0.28 and 0.30, and for aluminum alloys it is about 0.33.

9.6.6 Elastic Potential Energy in a Stretched Wire

When a wire is put under a tensile stress, work is done against the inter-atomic forces. This work is stored in the wire in the form of elastic potential energy. When a wire of original length L and area of cross-section A is subjected to a deforming force F along the length of the wire, let the length of the wire is elongated by l . Then from Eq (9.8) we have $F = YA(l/L)$. Here Y is the Young's modulus of the material of the wire. Now for a further elongation of infinitesimal small length $d l$, then the work done dW is $F d l$ or $YA d l/L$. Therefore the amount of work done (W) in increasing the length of the wire from $l=0$ to $l=l$ is

$$W = \int_0^l \frac{YA}{L} dl = \frac{YA}{L} \times \frac{l^2}{2}$$

$$W = \frac{1}{2} \times Y \times \left(\frac{l}{L}\right)^2 \times AL$$

$$= \frac{1}{2} \times \text{Young's modulus} \times \text{strain}^2 \times \text{volume of the wire}$$

$$= \frac{1}{2} \times \text{stress} \times \text{strain} \times \text{volume of the wire}$$

This work is stored in the wire in the form of elastic potential energy (U). Therefore the elastic potential energy per unit volume of the wire (u) is

$$u = \frac{1}{2} \sigma \epsilon$$

Chapter 10

Critical Velocity

(to be inserted on p, 260, Chapter 10, Physics Class XI, Vol. 2 text book before last paragraph of second column)

The maximum velocity of a fluid in a tube for which the flow remains streamlined is called its critical velocity. From Eq. 10.21 it is $v_c = R_e \eta / (\rho d)$

Chapter 11

11.9.4. Blackbody Radiation

We have so far not mentioned the wavelength content of thermal radiation. The important thing about thermal radiation at any temperature is that it is not of one (or a few) wavelength(s) but has a continuous spectrum from the small to the long wavelengths. The energy content of radiation, however, varies for different wavelengths. Figure A1 gives the experimental curves for radiation energy per unit area per unit wavelength emitted by a blackbody versus wavelength for different temperatures.

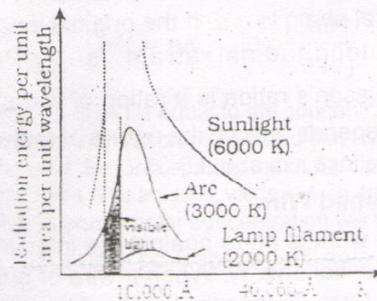


Fig. A1 Energy emitted versus wavelength for a blackbody at different temperatures

Notice that the wavelength λ_m for which energy is maximum decreases with increasing temperature.

The relation between λ_m and T is given by what is known as Wien's Displacement Law.

$$\lambda_m T = \text{constant} \quad (\text{A1})$$

The value of the constant (Wien's constant) is $2.9 \times 10^{-3} \text{ mK}$. This law explains why the colour of a piece of iron heated in a hot flame first becomes dull red, then reddish yellow and finally white hot. Wien's law is useful for estimating the surface temperatures of celestial bodies like the moon, Sun and other stars. Light from the moon is found to have a maximum intensity near the wavelength $14. \mu\text{m}$. By Wien's law, the surface of the moon is estimated to have a temperature of 200 K. Solar radiation has a maximum at $\lambda_m = 4753 \text{ \AA}$. This corresponds to $T = 6060 \text{ K}$. Remember, this is the temperature of the surface of the Sun, not its interior. The most significant feature of the blackbody radiation curves in Fig. A1 is that they are universal. They depend only on the temperature and not on the size, shape or material of the blackbody. Attempts to explain blackbody radiation theoretically, at the beginning of the twentieth century, spurred the quantum revolution in physics, as you will learn in later courses.

Energy can be transferred by radiation over large distances, without a medium (i.e. in vacuum). The total electromagnetic energy radiated by a body at absolute temperature T is proportional to its size, its ability to radiate (called emissivity) and most importantly to its temperature. For a body which is a perfect radiator, the energy emitted per unit time (H) is given by

$$H = A\sigma T^4 \quad (\text{A2})$$

where A is the area and T is the absolute temperature of the body. This relation obtained experimentally by Stefan and later proved theoretically by Boltzmann is known as Stefan-Boltzmann law and the constant σ is called Stefan-Boltzmann constant. Its value in SI units is $5.67 \times 10^{-8} \text{ W m}^{-2} \text{ K}^{-4}$. Most bodies emit only a fraction of the rate given by Eq (A2). A substance like lamp black comes close to the limit. One, therefore, defines a dimensionless fraction e called emissivity and writes,

$$H = Ae\sigma T^4$$

(A3)

Here $e = 1$ for a perfect radiator. For a tungsten lamp, for example, e is about 0.4. Thus a tungsten lamp at a temperature of 3000 K and a surface area of 0.3 cm^2 radiates at the rate $H = 0.3 \times 10^{-4} \times 0.4 \times 5.67 \times 10^{-8} (3000)^4 = 60 \text{ W}$.

A body at temperature T , with surroundings at temperatures T_s , emits as well as receives energy. For a perfect radiator, the net rate of loss of radiant energy is

$$H = \sigma A(T^4 - T_s^4)$$

For a body with emissivity e , the relation modifies to

$$H = e\sigma A(T^4 - T_s^4)$$

As an example, let us estimate the heat radiated by our bodies. Suppose the surface area of a person's body is about 1.9 m^2 and the room temperature is 22°C . The internal body temperature, as we know, is about 37°C . The skin temperature may be 28°C (say). The emissivity of the skin is about 0.97 for the relevant region of electromagnetic radiation. The rate of heat loss is :

$$H = 5.67 \times 10^{-8} \times 1.9 \times 0.97 \{(301)^4 - (295)^4\} = 66.4 \text{ W}$$

which is more than half the rate of energy production by the body at rest (120 W). To prevent this heat loss effectively (better than ordinary clothing), modern arctic clothing has an additional thin shiny metallic layer next to skin, which reflects the body's radiation.

11.9.5 greenhouse Effect

The earth's surface is a source of thermal radiation as it absorbs energy received from Sun. The wavelength of this radiation lies in the long wavelength (infrared) region. But a large portion of this radiation is absorbed by greenhouse gases, namely, carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); chlorofluorocarbons (CF_xCl_x); and troposphere ozone (O_3). This heats up the atmosphere which, in turn, gives more energy to earth resulting in warmer surface. This increases the intensity of radiation from the surface. The cycle of processes described above is repeated until no radiation is available for absorption. The net result is heating up of earth's surface and atmosphere. This is known as Greenhouse effect. Without the Greenhouse effect, the temperature of the earth would have been -18°C .

Concentration of greenhouse gases have enhanced due to human activities, making the earth warmer. According to an estimate average temperature of earth has increased by 0.3 to 0.6°C , since the beginning of this century, because of this enhancement. By the middle of the next century, the earth global temperature may be 1 to 3°C higher than today. This global warming may cause problem for human life, plants and animals. Because of global warming, ice caps are melting faster, sea level is rising, and weather pattern is changing. Many coastal cities are at the risk of getting submerged. The enhanced greenhouse effect may also result in expansion of deserts. All over the world efforts are being made to minimize the effect of global warming.

PART - B

THE COLLEGES

A. Rajiv Gandhi Govt. P.G. Ayurvedic College, Paprola, Distt. Kangra, H.P.-176115.

I. Location :

Rajiv Gandhi Govt. Post Graduate Ayurvedic College is situated at Paprola, Baijnath Sub- Division of Kangra District on Pathankot Mandi National Highway about 700 metres South of Paprola town on Paprola-Andreta link road. The nearest Railway Station is Baijnath Paprola (NR) which is at a distance of 1 km. only. The surroundings of the Institute are of tree covered small hills and are suited for best teaching & training activities. The surrounding hills are rich in natural flora including many important medicinal plants. The world famous Shiva Temple of Baijnath is about 1.5 KM from the College.

2. Historical Background :

The present College was started as a private Ayurvedic College by name "Him Ayurvedic College" at Paprola on 14th March, 1972. At that time College was affiliated to Punjab State Faculty of Ayurveda, Chandigarh and was managed by Vaidya Hakim Parishad of Himachal Pradesh from the year 1972 till March, 1978. It was awarding the degree of Graduate in Ayurvedic Medicine and Surgery (G.A.M.S.). This institute was taken over by the State Govt. in 1978. After the starting of Post-Graduate Classes in 1998 in the College, the Govt. of Himachal Pradesh has raised the status of the College to Post Graduate College. With each passing year the Institute has improved its academic activities and presently is recognised as one of the premier College of Ayurveda in India. It is recognized by CCIM and is affiliated to Himachal Pradesh University, Shimla.

3. Aims and Objectives:

The College, apart from serving as premier Institute of Teaching and Training of Ayurvedic under-graduate and post graduate students, is also engaged in promotion and propagation of alternative system of medicine i.e. Ayurveda. Some of the aims and objectives of this institute are listed below:-

- a. To promote the growth and development of Ayurveda.
- b. To produce graduates who could efficiently serve in state Ayurvedic health services and also as Ayurvedic practitioners by providing relief to the patients through various therapeutic measures.
- c. To conduct post-graduate training & research with the aim of producing specialists in various fields of Ayurveda and also to add to the research in Ayurveda on scientific parameters.
- d. To run a college hospital to provide health care to patients through specialists of various fields of Ayurveda.
- e. To coordinate with other state and national health services for providing complete health care to the suffering people of the state.
- f. To conduct re-orientation Training Programmes for Ayurvedic teachers and Physicians as part of Continued Medical Education and to empower them with the latest advances in the field of Ayurveda and modern sciences.
- g. To disseminate information of Ayurvedic education and research through periodicals, research papers, books, seminars, symposia, workshop, camps etc.

and to undertake other ancillary works for furtherance of the objectives of the institute.

4. Associated Hospitals and other Institutions:

The following institutions have been attached with this College for the purpose of teaching & training of the students vide H.P. Govt. notifications.

- I. Govt. Ayurvedic Research Centre and Hospital, Joginder Nagar.
- II. Govt. Ayurvedic Herbal Garden & Herbarium Joginder Nagar.
- III. Rajiv Gandhi Govt. Ayurvedic Hospital, Paprola.
- IV. Govt. Ayurveda Pharmacy, Joginder Nagar

5. Vacations

The BAMS batches w.e.f. 2013 onwards are allowed summer/ winter vacations for 30 days. They will only be

- a) Winter 21st December to 30th December (10 days),
- b) Summer 7th July to 26th July (20 days).

6. Academic Set-up:

The institution is affiliated to H.P. University, Shimla and each Academic session is from October to September. Himachal Pradesh University Shimla the affiliating University has its Board of Studies in Ayurveda and faculty of Ayurveda in its ordinance to regulate the CCIM approved Curriculum of studies of P.G. Courses.

7. Organizational Structure:

The present setup of Rajiv Gandhi Govt. Post Graduate Ayurvedic College and Hospital, Paprola is as follows:-

(A) ADMINISTRATIVE SET UP

Government of Himachal Pradesh

1. Minister of Ayurveda
2. Principle Secretary Ayurveda, Govt. of H.P.
3. Director of Ayurveda, Govt. of H.P.
4. Principal & Dean
5. Medical Superintendent.
6. H.O.D./Academic In charges of 14 Academic Departments.
7. Pharmacy Manager.

(B) TEACHING DEPARTMENTS (14)

1. Department of Kayachikitsa (PG)
2. Department of Shalya Tantra (PG)
3. Department of Shalakya Tantra (PG)
4. Department of Ayurved, Samhita & Basic Principles (PG)
5. Department of Prasuti Tantra and Stri Roga (PG)
6. Department of Ras-Shatra & Bhaishajya Kalpana (PG)
7. Department of Dravyaguna Vigyana (PG)
8. Department of Sharir Kriya
9. Department of Sharir Rachna
10. Department of Rog Nidan (PG)
11. Department of Swasthvritta (PG)
12. Department of Agad Tantra & Vidhi Ayurved

13. Department of Panchkarma (PG)

14. Department of Kumar Bharitya-Bal-Roga (PG)

7. Department wise teaching faculty of the College

Sr. No.	Name	Qualification	Designation (All are full time)	Designation
1.	Prof. Y.K.Sharma	M.D.(Ayu.)Ph.D	Principal-cum-Dean	Kayachikitsa
Teaching Faculty				
1. Department of Kayachikitsa				
1.	Prof. B.L.Mehra	M.D.(Ayur.)Ph.D	Prof. & Head	Kayachikitsa
2.	Dr. Vijay Chaudhary	M.D.(Ayu.)Ph. D. PGDHM	Reader	Kayachikitsa
3.	Dr. Anjana Mishra	M.D.(Ayu.)	Sr. Lecturer	Kayachikitsa
4.	Dr. Sunil Kumar	M.D.(Ayu.)	Lecturer	Kayachikitsa
2.Department of Shalya Tantra				
5.	Prof. Ramesh Arya	M.D.(Ayu.)Ph.D.	Prof. & Head	Shalya Tantra
6.	Prof. Sanjeev Sharma	M.D.(Ayu.)Ph.D	Professor	Shalya Tantra
7.	Dr. Anil Dutt	M.S.(Ayu.)	Reader	Shalya Tantra
8.	Dr. Anil Sharma	M.S.(Ayu.)	Reader	Shalya Tantra
9.	Dr. Kulwant Himalayan	M.S.(Ayu.)	Sr. Lecturer	Shalya Tantra
10.	Dr. Suman Sharma	M.S.(Ayu.)	Sr. Lecturer	Shalya Tantra
3. Department of Kaumar Bhritya-Bal Rog				
11.	Dr. T.Kishan	M.D.(Ayu.)	Prof. & Head	BalRog
12.	Dr. Rakesh Sharma	M.D(Ayu.) Ph.D	Reader	BalRog
13.	Dr. Vinod Kumar	M.D.(Ayu.)PGDHM	Sr. Lecturer	BalRog
14.	Dr.Minakshi	M.D.(Aur.)	Lecturer	BalRog
4. Department of Shalakyta Tantra				
15.	Dr. Sanjeev Awasthi	M.D.(Ayu.)	Reader & Head	Shalakyta Tantra
16.	Dr. Satish kumar	M.S.(Ayu.)Ph.D.	Reader	Shalakyta Tantra
17.	Dr. Vijayant Bhardwaj	M.D.(Ayu.)Ph.D.	Sr. Lecturer	Shalakyta Tantra
18.	Dr. Sukh Dev	M.D.(Ayu.)Ph.D.	Sr. Lecturer	Shalakyta Tantra
19.	Dr. J.S. Bhandhari	M.S.(Ayu.)	Lecturer	Shalakyta Tantra
5. Department of Rgo Nidan				
20.	Dr. Dalip Sharma	M.D.(Ayu.)PGDHM	Reader & Head	Rog Nidan
21.	Dr. Rajesh Manglesh	M.D.(Ayu.)	Reader	Rog Nidan
22.	Dr.Akhilesh Srivastav	M.D.(Ayu.), Ph. D.	Sr. Lecturer	Rog Nidan
23.	Dr. Swapnil Saini	M.D.(Ayu.)	Lecturer	Rog Nidan
6. Department of Prasuti Tantra & Stri Rog				
24.	Prof. Eena Sharma	M.D.(Ayu.)	Prof. & Head	Prasuti Tantra
25.	Dr. Kamini Dhiman	M.D.(Ayu.)Ph.D.	Reader	Prasuti Tantra
26.	Dr. Seema Shukla	M.D.(Ayu.)	Sr. Lecturer	Prasuti Tantra
27.	Dr. Soni Kapil	M.D.(Ayu.)Ph.D.	Lecturer	Prasuti Tantra
7. Department of Dravya Guna Vigyan				
28.	Dr. Ashawani Upadhyay	M.D.(Ayu.)Ph.D.	Reader & HOD	Dravyaguna
29.	Dr. Navneet Sharma	M.D.(Ayu.)	Reader	Dravyaguna

30.	Dr. Rashmi Shrivastava	M.D.(Ayu.)	Sr. Lecturer	Dravyaguna
8. Department of Ras-Shastra avam Bhaishjya kalpana				
31.	Dr. C.P. Kasyap	M.D.(Ayu.)	HOD & Reader Lectrer	Ras- Shastra
32.	Dr. Janak Raj	M.D.(Ayu.) Ph.D.	Sr. Lecturer	Ras-Shastra
33.	Dr. Neelam	M.D.(Ayu.)	A.M.O.	Ras-Shastra
9. Department of Rachna Sharir				
34.	Dr. Upender Nath	M.D.(Ayu.)	Reader & Head	Rachna Sharir
35.	Dr. R.M. Kushwaha	M.D.(Ayu.)	Sr. Lecturer	Rachna Sharir
10. Department of Kriya Sharir				
36.	Dr. Rakesh Thamman	M.D.(Ayu.) Ph.D.	Reader & Head	Kriya Sharir
37.	Dr. Vinod Kumar Singh	M.D.(Ayu.)	Sr. Lecturer	Kriya Sharir
11. Department of Swasthavritta & Yoga				
38.	Dr. Y.D.Bansal	M.D.(Ayu.)	Reader & Head	Swasthavritta
39.	Dr. Tak Chand Thakur	M.D.(Ayu.)	Reader	Kayachikitsa
40.	Dr. Rajika Gupta	M.D.(Ayu) Ph.D	Sr. Lecturer	Kayachikitsa
41.	Dr. Umesh Shukla	M.D.(Ayu)	Lecturer	Kayachikitsa
12. Department of Agad Tantra and vidhi Ayurved				
42.	Dr. Jaram Singh	M.D.(Ayu.)	Reader & Head	Dravya Guna
43.	Dr. M.L.Prajapati	M.D.(Ayu.)	Sr. Lecturer	Kayachikitsa
13. Department of Basic Principles (Samhita, Siddhanta & Sanskrit				
44.	Prof. Naresh Sharma	M.D.(Ayu.Ph.D.	Prof. & Head	Basic Principles
45.	Dr. Nigam Sharma	M.A.(Skt.)Ph.D.	Reader	Sanskrit
46.	Dr. Rajesh Sood	M.D.(Ayu.)	Reader	Basic Principles
47.	Dr. Satish Kumar	M.D.(Ayu.)	Reader	Basic Principles
48.	Dr. Karam Chand	M.A.(Skt.) Ph.D.	Lecturer	Sanskrit
49.	Dr. Sonia Sharma	MD(Ayu.)	Lecturer	Basic Principles
50.	Dr. Shashikant Bhardwaj	M.D.(Ayu.)	A.M.O.	Basic Principles
14. Department of Panchkarma				
51.	Dr. J.C.Kaushal	M.D.(Ayu.)	Reader & Head	Panchkarma
52.	Dr. Pushpender Singh	M.D.(Ayu.)	Reader	Panchkarma
53.	Dr. Anil Bhardwaj	M.D.(Ayu.)	Sr. Lecturer	Panchkarma

8. Fee and Subscriptions:

Newly admitted students must pay their fees in full within the prescribed period, which will be notified by the institute office. No student's name will be enlisted in attendance register unless he/she has paid the prescribed fees. The seat of the student, who does not pay the fees within the prescribed period, shall be declared vacant and filled by admitting candidate on the waiting list.

Fee & Funds BAMS Course	
Ist Year BAMS	Rs. per annum
Tution Fee	11,500.00

Admission Fee	2000.00
Student Welfare Fund	3000.00
Medical Fund	-
Security	3000.00
Dedicated Fund	3500.00
Magazine Fund	100.00
Practical Fund	3,000.00
Library Fund	500.00
Building Fund	1500.00
Computer lab/Internet Charges	700.00
Identity Card Fee	100.00
Total	28,900.00
2nd Year BAMS	Rs. Per Annum
Tuition Fee	11,500.00
Admission Fee	-
Student Welfare Fund	3000.00
Medical Fund	-
Security	-
Dedicated Fund	3500.00
Magazine Fund	100.00
Practical Fund	3000.00
Library Fund	500.00
Building Fund	1500.00
Computer lab/Internet Charges	700.00
Identity Card Fee	-
Education Tour Fund	6,000.00
Total	29,800.00
3rd Year BAMS	Rs. Per Annum
Tuition Fee	11,500.00
Admission Fee	-
Student Welfare Fund	3000.00
Medical Fund	-
Security	-
Dedicated Fund	3500.00
Magazine Fund	100.00
Practical Fund	3000.00
Library Fund	500.00
Building Fund	1500.00

Computer lab/Internet Charges	700.00
Identity Card Fee	-
Education Tour Fund	-
Total	23,800.00
4th year BAMS	Rs. Per Annum
Tution Fee	11,500.00
Admission Fee	-
Stundent Wefare Fund	3000.00
Medical Fund	-
Security	-
Dilpapidated Fund	3500.00
Magazine Fund	100.00
Practical Fund	3000.00
Library Fund	500.00
Building Fund	1500.00
Computer lab/Internet Charges	700.00
Identity Card Fee	-
Education Tour Fund	-
Total	23,800.00
5th year BAMS	Rs. Per Annum
Tution Fee	11,500.00
Admission Fee	-
Stundent Wefare Fund	3000.00
Medical Fund	-
Security	-
Dilpapidated Fund	3500.00
Magazine Fund	100.00
Practical Fund	3000.00
Library Fund	500.00
Building Fund	1500.00
Computer lab/Internet Charges	700.00
Identity Card Fee	-
Education Tour Fund	-
Total	23,800.00

9. Hostel fees and Funds:

Hostel Fee of Boys & Girls Hostels (if provided for each year except mess security:
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Room rent	5000.00
Electricity & water charges	6000.00
Dilapidated	4000.00
Common Room fund	1000.00
Crockery and utensils fund	1500.00
Student fund	1500.00
Hostel Security (Refundable)	1000.00
Total	20000.00

Note (i) The Hostel funds deposited by Hostellers can be used as per the need from one Head to Other Fee Head.

- (ii) The hostel security of Rs. 1000.00 to be charged only once from all hostellers.
- (iii) Hostel will be allotted subject to the availability of accommodation.
- (iv) The above fees structure shall be applicable to the students admitted w.e.f. Session 2016-17
- (v) Educational Tour Fund 2nd Year BAMS Rs.6000/- per annum(BAMS II Prof)educational tour is conducted of Ras Shastra Dravva Guna & Swasthvarita for local and out state. Besides this Forensic Medicine and Post Mortems demonstration tour to IGMS is conducted.

Fees will be charged for full calendar month and not any part thereof. The total College and hostel fees will be paid in two installments in the month of March/September or as notified for the 2nd, 3rd, 4th and 5th years students except newly admitted first year students. The first installment of college fee will consist of half of the tuition fee and all of the private charges and the second installment will be charged with the remaining half of the tuition fee. The first installment of hostel fee will be charged half of the hostel fee inclusive of electricity and water charges plus the remaining other charges in full. Second installment will consist of the remaining other charges in full. The fees should be deposited by fifteenth of the month in which it becomes payable without the late fee and up to the last date of the month with late fee of Rs.10/- per day. No notice will be displayed for depositing the college/hostel fees and it will be student's responsibility to pay the dues in time. Failure to pay all fee and other dues in full by the last day of the month by they are payable shall automatically entail removal of the student name from the roll. He/she however may be readmitted on payment of arrears of fees plus readmission fee of Rs. 2500/- The Principles/Director however, is empowered to grant exemption of fine in deserving cases.

1. In case the last day happened to be a Sunday or a Holiday the fees shall be payable on the next working day.
2. (a) Fees once paid shall not be refunded but in the case of students who are prevented by illness or for other reasons beyond their control from attending the College in the year which they paid usual fees, the Principal/Director may directed that the whole part of the amount of fees shall not be again paid for the year in which such students joined the College/Institute. (b) There will be no refund of fees and funds after cutoff date of admission i.e. 31-10-2016, however 60% of the funds (except fee) can be refunded up to 31-10-2016.
3. The students seeking admission first time to the hostel shall pay the room rent from the month of admission at the rate prescribed thereof along with the caution money of Rs. 1000/- for admission to the hostel.
4. The rules pertaining to the non-payment of College fees apply to the non-payment of room rent from the month of the admission as well, with the difference that the re-admission fee for hostel will be equal to month's

- room rent. The room rent once paid shall not be refunded on any account.
5. A remanded student including final year will be charged a fee of Rs. 500/- for one subject plus Rs. 100/-for each additional subject which he/she is required to attend under the rules of the College or University regulations for the period of remand. In addition to this he/she shall be charged practical fees of Rs. 150/- for BAMS examination and a hospital fee of Rs. 200/- if required to do the training in College Hospital.
 6. Securities not claimed within two years after the student has left the Institute will lapse to the student's fund after deducting unpaid dues and charges.
 7. Internees/House Physicians residing in Hostel shall also have to pay fee as is applicable to other professional year students. However, in case of internees, House physicians, P.G. Scholars hostel Fee, shall be charged for the number of month basis left for the completion of degree / duration of assignment after depositing fee of the previous year.
 8. Undergraduate Hostellers are not permitted to keep their Four Wheelers in Hostels

10 Courses of Studies and Examinations:

1. Duration of Course: 5 ½ years, comprising

a.	I Professional	12 months
b.	II Professional	12 months
c.	III Professional	12 months
d.	Final Professional	18 months
e.	Compulsory Rotary	12 months

11. **Degree to be awarded:** Ayurvedacharya (Bachelor of Ayurvedic Medicine and Surgery -B.A.M.S).The candidate shall be awarded Ayurvedacharya (Bachelor of Ayurvedic Medicine and Surgery -B.A.M.S) degree after passing the final examination, after completion or prescribed course of study extending over; prescribed period and thereafter satisfactorily completing the compulsory rotatory internship extending over twelve month.

- 12 **Medium of instructions:** Sanskrit, Hindi any recognized regional language or English.

FIRST PROFESSIONAL EXAMINATION :

i. The first professional examination shall be at the end of one academic year of First professional session . The professional session will ordinary start in Sep/Oct.

ii. The first professional examination shall be held in the following subject

1. Padarath Vigyan avam Ayurved Itihas
2. Sanskrit
3. Kriya sharir (Physiology)
4. Maulik Siddhant avam Ashtang Hridaya(Sutra Sthana)
5. Rachna Shrir and Anatomay

A Student failed in not more than two subject shall be held eligible to keep the terms for the Second Professional Course. However he/ She will not be allowed to appear in the second professional examination unless he /She passes in all the subjects of the first professional.

SECOND PROFESSIONAL EXAMINATION:

- i. The second professional Session shall start every year in the month of Sep/Oct. following completion of the First professional.
The second professional examination shall be ordinary held and completed by

the end of month of August/September every year after completion of one year of second professional session.

- ii. The Second professional examination shall be held in the following subject:-
 1. Dravyaguna Vigyan (Pharmacology and Materia Medica)
 2. Rassashastra -Bhashajya Kalpana (Pharmaceutical Science)
 3. Agad Tantra Vvavhar Ayurvedevam VidhiVaidyaka (Toxicology and Medical Jurisprudence)
 4. Charak Samhita- Purvardh
- iii. A student failed in not more than two subjects shall be held eligible to keep the terms for the third professional examination However he/she will not be allowed to appear the third professional examination unless he/she passes in all subject of second professional examination.

THIRD PROFESSIONAL EXAMINATION:

- i. The Third Professional Session shall start every year in the month of Sep/Oct. following completion of the second professional examination. The Third professional examination shall be ordinary held and completed by the end of month of Sep/Oct every year after completion of one year of Third professional session. The Third Professional Examination shall be ordinary held on following subjects:-
 1. Roga Nidan Vikriti Vigyan (Pathology & Microbiology)
 2. Charak Samhita-Uttarardh
 3. Swastha Virtta & Yoga (Preventive and Social Medicine & Yoga)
 4. Parsuti & Strioga (Gynaecology & obstetrics)
 5. Bal Roga (Paediatrics)
- II A student failing in not more than two subjects shall be held eligible to keep the terms for the final professional examination However he/she will not be allowed to appear in the final professional examination unless he/she passes in all subjects of Third Professional Examination.

FINAL PROFESSIONAL EXAMINATION:

- i. The Final Professional Session will be of 18 months duration and shall start every year in the month of Sep/Oct following completion of Third Professional Examination.
- ii. The final professional examination shall ordinary be held and completed by the end of month of March/April. every year after completion of one and half year Final Professional Session
- iii. The final professional examination shall comprise of the following subject :-
 1. Shalya Tantra (General Surgery)
 2. Shalakya Tantra (Diseases of head & neck including Ophthalmology, ENT and Dentistry)
 3. Kayachikitsa (Internal Medicine including Manas Roga Rasayan & Vajikarana)
 4. Panchkarm
 5. Research Methodology & Medical Statistics

NOTE:

Clinical training of the students will start from third year onwards.

The clinical training in the hospital attached with college to the students shall be as follows:-

- | | | |
|-----|--------------------------------------|--------------------------------------|
| i) | Kayachikitsa (Indoor and Outdoor): | 18 months |
| | a) Kayachikitsa (Samanya) | 06 months |
| | b) Manasroga | 03 months |
| | c) Rasayan & Vajikaran | 03 months |
| | d) Panchakarma | 03 months |
| | e) Rog Vigyan Vikriti Vigyan | 03 months |
| ii) | Shalya (Indoor & Outdoor) | 09 months |
| | a) Shalya (Samanya) | 03 months (at least one month in OT) |
| | b) Shalya (Kshar & Anushastra Karma) | 03 months (at least one month in OT) |
| | c) Ksharsutra | 02 months |
| | d) Anaesthesia | 15 days |
| | e) Radiology | 15 days |

- | | |
|--|----------------------------------|
| iii) Shalakya Tantra(Indoor & outdoor) | least one month in OT) 03 months |
| iv) Prasuti Tantra AvamStriroga | (Out door & indoor) |
| v) Kaumar Bhritya (Outdoor & Indoor) | 1 month
2 months |
| vi) Atyayik (casuality) 04 months (at | |

12 :COMPULSORY INTERNSHIP

Duration of Internship

The student will join the compulsory internship programme after passing Final Professional Examination. The Internship program will start after the declaration of the result of Final Professional Examination. The period of the internship will be of one year. Internship Programme and time distribution will be as follows:-

1. The intern will receive an orientation regarding details of internship programme along with the rules and regulations, in an orientation workshop, which will be organized during the first three day of the beginning of internship programme. A workbook will be given to each intern. The intern will enter date wise details of activities undertaken by him/her during his /her training.
 2. Every Intern will provisionally register himself with the Himachal Ayurved and Unani Registration Board and obtain a certificate to this effect before joining internship program.
 3. Normally one year internship programme will be divided to clinical training of six month on the Ayurvedic hospital attached to the college and six month in PHC/CHC/Rural hospital /District Hospital Civil Hospital. Permission of the State Government for allowing the Graduates of Ayurveda in the hospital /dispensary of Modern Medicine will be obtained in advance.
- A Clinical Training of Six/Twelve months as case may be in Ayurvedic hospital attached to the college will be conducted as follows

Department months		Distribution of Six months	Distribution of twelve months
1	Kayachikitsa	2 Month	4 Month
2	Shalya	1 Month	2 Month
3	Shalakya	1 Month	2 Month
4	Parsuti and Striroga	1 Month	2 Month
5	Kaumarbhritya	15 Days	1 Month
6	Panchkarm	15 Days	1 Month

Guidelines for conducting the internship clinical Training of 06/12 month in the ayurvedic Hospital attached to the college. The intern will undertake following activities in respective department as shown below:-

1. Kayachikitsa Duration : 2 month /4 month
 1. All routine work such as case taking, investigation, diagnosis and management common disease by ayurvedic medicine.
 1. Routine clinical pathological work i.e. haemoglobin estimation complete haemogram, urine analysis, microscopic examination of blood parasites, sputum examination, stool examination etc. Mutra avam mala pariksha by ayurvedic method. Interpretation of laboratory of data and clinical finding and arriving at a diagnosis.
2. Panchkarm -duration : 15 days /1 moth
 - 1) Panchkarm producers and techniques regarding poorvakarma Pradhan karma and
 - B Six month training of interns will be carried out with an object to orient and acquaint the intern with national health program. The intern will have to join in one of following Government institute for undertaking such training.
 - a) Primary Health Care
 - b) Community Health Centre /District Hospital Any Hospital of modern
 - c) medicine Any Ayurveda hospital or dispensary.

Detailed Guidelines for Training Programme:

- paschat karma.
3. Shalya Duration : 1 Month /2 Months :

Intern should be trained to acquaint with

 - I. Diagnosis and management of common surgical disorder according to ayurvedic principles.
 - II. Management of certain surgical emergencies such as fractures and dislocations, Acute abdomen etc.
 - III. The practical training of aseptic and antiseptics technique, sterilization etc.
 - IV. Intern should be involved in pre-operative and post-operative management.
 - V. Practical use of anesthetic techniques and use of anesthetic drugs.
 - VI. Radiological procedure, clinical interpretation of X-ray, IVP Barium meal, Sonography etc.
 - VII. Surgical procedures and routine ward techniques such as:-
 - i. Suturing of fresh injuries.
 - ii. Dressing of wounds, burns, ulcers etc.
 - iii. Incision of abscesses.
 - iv. Excision of cysts.
 - v. Application of Ksharasutra in Ano Rectal diseases.
 4. Shalakyas Duration : 1 month /2 month :

Intern should be trained to acquaint with

 - a) Diagnosis and management of common surgical disorder according to ayurvedic principles.
 - b) Intern should be involved in pre-operative and post-operative managements.
 - c) Surgical procedures in Ear, Nose, Throat, dental problems ophthalmic problems.
 - d) Examination of Eye Ear and Nose throat and refractive error etc. with the supportive instrument in OPD.
 - e) Procedures like Anjanana Karma, Nasya, Raktamokshan, Karnapuran, Shirodhara Put Pak, Kawal, Gandush etc. at OPD level.

5. Prasuti & Striroga Duration : 1 Month

A Intern should be trained to acquaint with

- a) Antenatal and post-natal problem and their remedies, Antenatal and post-natal care.
- b) Management of normal obstetric surgical procedures etc.
- c) Minor and major obstetric surgical procedures etc.
- d) Balroga Duration :15days 1Month

Intern should be trained to acquaint with

- a) Antenatal and post-natal problems and their remedies ,Antenatal and post-natal care also by ayurvedic principles and medicine .
- b) Antenatal and Post-natal emergencies.
- c) Care of new born child along with immunization Programme.
- d) Important pediatric problem and their ayurvedic management.

B. PHC/Rural Hospital /District Hospital /Civil Hospital or any Govt. Hospital of Modern Medicine.

Guidelines for conducting six month internship training in primary Health Centre, Community Health Centre/District Hospital; Any hospital of modern medicine and Ayurveda hospital or dispensary

Intern should get acquainted with -

- I. Routine of PHC and maintenance of their record.
- II. They should be acquainted with the routine working of the medical/para -medical staff of PHC and be always in contact with the staff in this period .
- III. They should be familiar with work or maintaining of the register e.g. daily patients register, family planning register, surgical register and take active participation in different Government health Schemes /Programme.
- IV. They should participate actively in different National Health Programmes of Government of State/Districts
- C. Casualty Section: of any recognized hospital of modern medicine.

Identification of casualty and trauma cases and their first aid treatment. Also procedures for referring such case to identified hospital

D. Rural Ayurvedic dispensary /Hospital:

Diseases more prevalent in rural and remote areas and their management.

Teaching of health care method to rural population and also various immunization Programmes

I. Assessment

After completing the assignment in various section, they have to obtain a certificate from the head of the section in respect of their devoted work in the section concern and finally submitted to Principal /Head of the institute so that completion of successful internship can be granted.

II. Migration of Internship

Migration of internship will be only with the consent of the both college & university, in case of migration is between two different universities and colleges. In case migration is only from college to college but university is not changed, only the consent of both the colleges will required . The migration will be accepted by the university on the production of character certificate issued by the institute and application forward by the college and university with NOC as case may be.

III. Examination :

- I. Theory examination shall be minimum 20% short answer question having maximum mark up to 40% & minimum 4 question for long explanatory answer having maximum marks up to 60%. These questions shall cover entire syllabus of subject.
- II. A candidate obtaining 75% mark or above in the subject shall be awarded distinction in the subject.
- III. The minimum marks required for passing the examination shall be 50% mark in theory and practical separately in each subject.
- IV. The supplementary examination will be held within 6th month of regular examination and failed student shall be essential for appearing in the examination as the case may be
- V. Minimum 75% required attendance *of the student* in each subject separately in the theory and practical shall be essential for appearing in the examination. In *this regard* a class attendance card shall be maintained for each student for the different subjects. The Principal shall arrange to obtain the signature of students and teachers at the end of each

- courses of lectures and practical instructions and send the card to each head of the department for the final completion before the commencement of the each examination.
- VI. In case the student fails to appear in the regular examination for the cognitive reason, he/she will appear in the supplementary examination as a regular student. In this case his /her non-appearance in the regular examination will not be treated as an attempt. Such student after passing examination will join the studies with regular students and appear for the next professional examination after completion the required period of study.
- VII The following fact may be taken into consideration in determining class work in the subject:-
- i) . regularity in attendance
 - ii) . periodical test
 - iii) . practical copy

13: Stipend and Scholarships:

1. Rs. 200/- per month for each student as Scholarship/stipend are being awarded to the students of BAMS 1st Prof., II Prof. and III Prof. on the basis of Poverty cum Brilliancy for Ten toppers.
2. Rs. 9000.00 per year for eligible girl students under "Maharishi Balmiki Stipend Yojna" as per notification of H.P. Govt. issued from time to time in this regard.
3. The students who pass their BAMS final Professional examination shall be required to undergo 12 months rotatory internship as per provisions laid down in H.P. University Ordinances. The compulsory 12 months rotatory internship will be carried out in Ayurvedic Hospital Paprola and other declared Institutions/Dispensaries as per duty roster to be issued by Ayurvedic Institute. All interns will be eligible for the stipend fixed by the State Government from time to time. These stipends will be granted for a period of 12 months only. The interns will be provided hostel facility subject to availability of accommodation in under graduate Hostels on the same Hostel fee as applicable to other BAMS students.
4. The students coming from other Ayurvedic colleges and going out from the college will not be eligible for the stipend
5. The institution once allotted for internship will not be changed.
6. Before starting the internship every student shall have himself/herself provisionally registered with H.P. Ayurveda and Unani Board as per CCIM and H.P. University ordinances failing which the stipend will not be paid to the concerned.

14: College Council:

There is a College and Hospital Council with Principal as its Chairperson. The Council is purely an advisory body to assist the administration.

15: House Tests:

At least one periodical examination in each part of the course will be arranged by the College. If any student does not secure 40% average marks in each House Tests, he/she may not be allowed to appear in the annual examination.

16: Attendance:

- (i) Every student is required to attend punctually at the hours notified for lectures and practical classes. A student who is late may not be allowed to enter the lecture theatre or practical hall.
- (ii) If a candidate fails to join the class/classes within the five days after his admission to the course, his/her name shall be struck off from the roll of the college without any notice.
- (iii) If a student of any professional class remains absent from the class/classes for continuous 10 days, his/her name will be struck off from the Institute. Re-admission shall be allowed in such cases only once in a particular class/session. Re-admission fee will be Rs. 2500/-.
- (iv) However, re-admission shall only be done on the recommendation of Academic Advisory Committee of the college, in case where the cause of absence is found to be justifiable like serious sickness, death of a family member etc.

17: Ragging:

Every student of the college is informed that under the orders of the Hon'ble Supreme Court of India vide this Judgments/orders dated 4th March, 2001, May 2007, and February 2009 which are to be followed in toto. The orders can be reviewed by candidates in the websites given below Judgment in Writ petition No 656 of 1998 of Vishwa Jagriti mission vs central Govt. Dated 4-5-2001 website:<http://stopragging.org/2004/14/full-text-the-supreme-court-order-banning-ragging/> and judgment Civil appeal No 887/2009 title the university in Kerala vs the council of Principals of college & other dated 11-2-2009 website: <http://courtnic.nic.in/supremecourt/temp/ac%2088709p.txt> etc-2. Under the Ordinance of Himachal Pradesh Government and the rules framed by the University there under vide Ordinance 22.17 ragging is completely prohibited in educational institutions in State.

All the admitted students will give an undertaking on an affidavit (Appendix-A-10) that they will not indulge in any act of ragging of juniors, directly or indirectly causing Physical or Mental distress or damage to any student during their entire stay in this college. They will make themselves aware of the Anti-Ragging guidelines of Hon'ble Supreme Court of India and State of Himachal. They should understand that provisions of Anti-Ragging guidelines and law are not only applicable in College Campus but are also applicable outside the Campus. They should understand that if found guilty of indulging in any act of ragging or any complaint of ragging is received against them, they shall be liable to disciplinary action by the college authorities and punishment as per law. They should further undertake to work for ragging free atmosphere inside and outside the college and report immediately to authorities if any such act comes in their notice.

If found involved in case of ragging the student may face imprisonment, fine or both, expulsion from institution, suspension from institution or classes for limited period or fine with public apology. The punishment of involvement in ragging may also include withholding of scholarship or other benefits, debarring from representation in events, withholding of results, suspension and expulsion from hostel or mess and the like. In case an individual committing or abetting ragging are not identified collective punishment could be resorted to, so as to act as deterrent punishment and to ensure collective pressure on potential raggers.

The Anti-ragging undertaking will also be submitted by the parent/legal Guardian of student as per Appendix-A-11.

Migration certificate of the student found to be involved in ragging shall have an entry that said student was found to be involved in act of ragging and was punished for ragging.

Ragging Reporting Telephone Numbers

1. Minister of Ayurveda, Govt. of Himachal Pradesh: 0177-2625400
2. Principal Secretary Ayurveda : 0177-2621904
3. Director Ayurveda : 0177-2622262.
4. Principal : 01894-242064 (Dr .Y.K. Sharma - 09418007291)
5. Chairman Anti-Ragging Committee: Dr. Dalip Sharma-09418047146.
6. Co-Chairman Anti-ragging Committee: Dr. Kamni Dhiman -09459168987
7. Chairman Student Welfare Committee: Dr. Anil Dutt-09418205225.
8. Warden Boys Hostel: i) Dr. Akhilesh Srivastav-09418118318.
ii) Sr. Warden Dr.Rakesh Thamman 9418119724
9. Warden Girls Hostel: Dr. Soni Kapil-094187-99799.

18: Class room:

On the entry of the teachers into the classroom, student shall stand up and remain standing until they are directed to sit or till the Professor/Teacher takes his seat. No student should leave the lecture theatre without the permission of the Teacher or until the class is over.

- (i) Immediately after assembly of the class the roll call will be called and absence of any student will be noted. Any student misbehaving in the class will be reported to the Principal for further necessary action.
- (ii) Students are not permitted to remain in the lecture room except at the prescribed hours of the lecture.

19: Examination:

1. 75% attendance is mandatory for appearing in annual examination.

2. Students are not allowed to take into the examination hall text books, notes or manuscripts of any kind.
3. Any student found infringing the rules or having recourse to unfair means will be expelled from the examination and the matter reported to the Principal for taking further action.

20: Leave:

- (i) No leave will be granted when examination is due.
- (ii) In all cases leave taken will be at the student's own risk so far as the percentage of attendance is concerned and even medical certificate will not condone a deficiency in attendance for a University Examination.
- (iii) Students must not leave the station without the permission of the Principal. If any student after getting admission remains absent for long duration due to known reasons & after the intervals of so many months he/she suddenly appear. Then they should appear before the medical board constituted in the college for the review of such cases so that unjustified cases should not get re-admission.

21: Books:

- (i) Every student will provide himself/herself with all the prescribed textbooks and other necessary appliance.
- (ii) Every student to whom books or other property of the Government are entrusted shall be held responsible for their preservation in good condition and in the event of their being lost or damaged shall be required to replace them and deposit their current price/cost.
- (iii) Any student breaking or damaging any College property shall be required to pay the cost of repairs or replacement in addition, in case of wilful damaged he/she will be punished as the Principal may deem fit.

22: Correspondence:

- (i) Students are forbidden to address any higher authority direct. Any communication intended for such higher authority must be submitted through Principal who will forward it if he considers it desirable. It will not be binding upon Principal that he must forward all such application.
- (ii) Every student desirous of addressing the Head of the Institute by letter must do separately. Joint applications are entirely prohibited and will not receive attention. Any student wishing to make a representation on any subject has the right of direct access to the Head of Institute during the college hours.
- (iii) The Principal, Professors and the staff are accessible for the consideration of difficulties and grievances of students and will be always pleased to hear them and give advice.

23: Miscellaneous:

- (i) Every student will wish his teacher on the occasion of his first meeting in the College or outside.
- (ii) Students are required to observe order and quietness at all times in the College.
- (iii) No game of any sort to be played during the hours allotted to lectures or class.
- (iv) Smoking and use of any intoxicant within the premises of the college are strictly prohibited.
- (v) All irregularities, neglect of duties and breach of discipline are to be brought to the notice of the principal by the teacher.
- (vi) In dealing with any offence in the Institute/Hostel, the head of the Institute may decide whether it is to be met with an apology verbal or written or fine. Suspension of scholarship or expulsion from the college/hostel. The Head of the Institute is competent to remit the fine imposed by him.
- (vii) The decision of the Principal in all cases shall be final.
- (viii) Girls students are required to wear simple dress in the College. Use of gaudy dress is prohibited.
- (ix) All students must provide themselves with washable white coats, which shall be worn while working in the college laboratories, hospital departments. The white coats should have embroidered or separate small name plate.

- (x) No association can be formed in the College without the permission of the Principal.
- (xi) No student is permitted to write anything on the blackboard unless asked by the teachers to do so.
- (xii) Student should not take part in politics.
- (xiii) Any change/amendment in the rules and regulations made by the Government/University/College as the case may be, shall be binding for all the students and applicable with immediate effect.

24: Sports:

Arrangements will be made for sports and games according to the season and facility available in the College.

25: Student Association:

The student association may be organized with the approval of Principal to promote the cultural and extra academic activities and welfare of the students.

26: Library Rules:

There is library maintained by the College for the students/staff. The member of the library shall abide by the Library Rules, approved by the Principal by time to time available with College Library.

27: Hostel Rules:

In this College there are three hostels i.e. two girls and one for boys. Every hosteller shall abide by the Hostel Rules as may be approved by the Principal of Institution from time to time. Rules regarding Anti-ragging as mentioned in ragging charter may be applied to all the hostellers on the instructions given by Hon'ble Supreme Court of India and the Laws framed by State Govt of Himachal Pradesh as well as orders issued by College authorities.

28: SOME DON'TS (For details see Hostel Rule Book)

1. Do not interfere with the electric installation of the Hostels
2. Do not keep any electrical appliances namely Radio Sets and Room Heaters etc.
3. Do not indulge in unauthorized meetings acrimonious discussion and controversial debate within the hostel premises
Do not keep any jewellery, valuable articles or large sum of money in your room.
4. Switch off the lights and fans when not in use and do not run water tap unnecessarily.
5. Do not be absent from the hostel after night roll call. It is serious offence which may cause expulsion from the Hostel.
6. Do not keep any arms or incendiary articles. It is dangerous to the fellow residents.
7. Do not use any kerosene stove or burner in the room.
8. Do not keep any pets in the room.
9. Do not cook in the room as it is totally prohibited.
10. Do not keep guest in hostel rooms as it is totally prohibited.
11. Ragging is offence and do not involve in any such activities.

29: Utilization of association, magazine and sports fund.

These funds are controlled by two committees separately viz. Students Funds/Hostel Committee. These committees maintain and operate the funds on the activities of the students mentioned below.

1. Purchase of spot material pertaining to various games.
2. Amenities for NCC if these exist in the institution.
3. Watering, leveling, clearing and turfing of play grounds.
4. General expenditure on the grant of societies, club, associations, committee, sabhas, etc. organized by the College.
5. Expenditure in connection with education trips to places of historical, geographical interest or mountaineering trips or visits to factories and hospital.
6. Expenditure on connection with community projects or social activities approved by the Principal.
7. Expenditure for sending students to compete in debates, declamation contests, music, dramatic contests.

8. Hire, carriage of furniture and loud speakers and refreshment to players, prizewinners and guests invited to sports and other functions.
9. Conveyance and boarding charges of outside lecturers, prominent citizens, poets and artists, etc. approved by the Principal/Head of the Institute.
10. Travelling allowance to persons invited to deliver lectures at the college or to preside over convocation or prize distribution function.
11. Expenditure on establishment of staff and students when they go to represent the college in sports or other contests.
12. Travelling allowance to teams and members of the staff, peon and servants accompanying the teams.
13. Daily allowance to the members of staff and students when they go out to represent college in sports or other contests.
14. Refreshment and meal at the time of friendly and / or university matches and for distinguished visitor at college functions.
15. Photographs of teams or executive of student's union.
16. Expenditure in connection with the award of college colours to distinguished players.
17. Purchase of stock register, cashbooks, etc. required for maintaining accounts pertaining these funds.
18. Postage, telegrams, telephones and purchase of stationery pertaining to students activities.
19. Expenditure in connection with award or prize, at the annual sports prizes distribution or the college convocation.
20. Purchase of articles of furniture, equipment for social and cultural activities like drama, music etc.
21. Expenses on medical assistance rendered to members of sports teams when out of station.
22. Uniforms or other equipment for members of various teams at the direction of Principal.
23. Publication of college magazine.
24. The hostel funds will be utilized for purpose for which they are meant as laid down in the hostel rules but the elected members or the hosteller as a whole in the general meeting in which % hostellers must be present. under the chairmanship of the Principal, may divert this fund from one to the other purpose as they may deem fit.
25. Any other object connected with the student's activities of educational character, approved by the Principal.

30: Medical facilities:

Every student shall be given a medical check-up periodically. The examination may be repeated in case requiring further investigations. Serious illness shall be brought to the notice of parents or guardians and treatment is given in the college hospital. Serious medical defects requiring operations and detailed investigations are reported to the parents and every possible assistance is given to have the defects removed at the college hospital.

31: Bank facilities:

There is extension branch of Kangra Central Cooperative Bank in the college campus to facilitate all the students. Working hours of the Bank is 10.00 am to 1.00 pm daily except holidays.

32: College Canteen facilities:

College canteen facilities are available in the college campus and provides Snacks, Tea and Lunch etc on demand. Working hours is 10.00 am to 5.00 pm.

33. Campus Security Fund:

To provide 24 hours security in Campus. Students studying in College (Both UG/PG) shall have to pay Rs.2500/- per annum as Security Fund. This amount is non-refundable. This will be applicable to all new as well as existing batches of BAMS & MD/MS Scholars.

B. Solan Homoeopathic Medical College & Hospital (Pvt.)

Barog Bye-pass, Kumarhatti-173 229, Distt. Solan

About Homoeopathy: Homoeopathy has been in existence worldwide for more than two hundred and fifty years and its popularity is steadily rising as the most accepted 'alternative' therapy not only in India, but in fact all over the world. Homoeopathy is a complete system of medicine, recognized by WHO (World Health Organization) as a second largest therapeutic system of medicine that assists the natural tendency of the human body to heal itself

The Institution: Solan Homoeopathic Medical College & Hospital is the first & only Homoeopathic Medical College in the state of Himachal Pradesh, established in 2002 by **Health Trust of India**, a registered charitable trust.

The institution offers you the most distinguished study programme, the best ambience and the most rewarding career.

Recognition: The college is affiliated to **H. P. University**, Shimla, approved by the **Himachal Pradesh Government** & Recognized by the **Central Council of Homoeopathy**, Department of AYUSH, Ministry of Health & Family Welfare (Govt. Of India) New Delhi for 5 ½ Years degree course – **B.H.M.S** (Bachelor of Homoeopathic Medicine & Surgery) which includes one year rotatory internship.

Location : The Institution is conveniently located on the National Highway-22 on **Barog-Bypass road at KUMARHATTI**, Distt. Solan with easy access by road and rail in its sprawling premises with a total area of approx. 56,000 sq. ft. It is midway between Chandigarh & Shimla.

Infrastructure:The institution has large lecture halls, administrative offices, well stocked library, canteen, OPD, IPD, girls hostel and other common areas besides twelve well appointed departments:

Department of Anatomy

Department of Physiology & Biochemistry

Department of Pathology & Microbiology

Department of Forensic Medicine & Toxicology

Department of Obstetrics & Gynecology

Department of Surgery

Department of Practice of Medicine

Department of Community Medicine

Department of Organon of Medicine & Psychology

Department of Homoeopathic Materia Medica

Department of Homoeopathic Pharmacy

Department of Repertory

Academics, Extracurricular activities and sports: In addition to classroom lectures, laboratory demonstrations, cadaver dissection and other audio-visual aids our students have always been keen on accumulating knowledge from various learned personalities by attending seminars, discussions and workshops on different medical related subjects. Extra curricular activities and sports events are organized from time to time to keep young medicos in best of their health and general wellness. Students are also encouraged to participate in inter-college competitions and they have won many prizes and trophies to their credit.

Homoeopathic Hospital & Peripheral Dispensaries:The college has an attached 25 bedded hospital with regular OPDs and facilities for laboratory examinations. For rural areas we run 10 peripheral dispensaries and regular free medical checkup camps are also arranged for ailing humanity. **These Dispensaries are situated in villages namely Dharpur, Kasauli, Garkhal, Nauni, Sabathu, Solan, Kumarhatti and Vakanaghat, etc.**

Ragging Free Campus: The college adopts zero tolerance to ragging as per directions from Hon'ble Supreme Court of India. Ragging is criminal offence and lowers the standards of education. The 'anti ragging policy' adopted by institution takes care of preventive, procedural and punitive aspects of ragging based on the guidelines

provided by Hon'ble Supreme court of India, recommendations of the Raghvan Committee, instructions/guidelines issued by the UGC, ministry of HRD (Govt. of India) and Govt. of Himachal Pradesh.

Any ragging incidents can be reported on following telephone Nos.:

Ragging Reporting Telephone Numbers

1.	Minister of Ayurveda, Govt. of Himachal Pradesh	0177-2625400
2.	Principal Secretary Ayurveda	0177-2621904
3.	Director Ayurveda	0177-2622262
4.	Principal - Dr. N. P.Singh	09218689991
5.	Chairman Anti-Ragging Committee: Dr. N.P. Singh	09218689991
6.	Co-Chairman Anti-ragging Committee: Dr. Rajnesh Sharma	09129656016
7.	Admn. Officer : Mr Vishal Sharma-	09816086657
8.	Dr. Pawan Dviwedi	09805387757
9.	Warden Girls Hostel: Mrs. Meenu Sharma	09882137069

The Curriculum: *B.H.M.S.*

1st Prof.

- Anatomy, Histology and Embryology.
- Physiology including Biochemistry.
- Organon of Medicine, Principles of Homoeopathic Philosophy & Psychology.
- Homoeopathic Pharmacy.
- Homoeopathic Materia Medica.

B.H.M.S. 2nd Prof.

- Pathology & Microbiology including Parasitology, Bacteriology & Virology.
- Forensic Medicine & Toxicology.
- Organon of Medicine and Principles of Homoeopathic Philosophy.
- Homoeopathic Materia Medica

B.H.M.S. 3rd Prof.

- Surgery including ENT, Ophthalmology and Dental with Homoeopathic Therapeutics.
- Obstetrics, Gynaecology and Infant care with Homoeopathic Therapeutics.
- Homoeopathic Materia Medica.
- Organon of Medicine.

B.H.M.S. 4th Prof.

- Practice of Medicine.
- Homoeopathic Materia Medical.
- Organon of Medicine.
- Case taking & Repertory.
- Community Medicine.

Besides above mentioned mandatory subjects, students are also required to appear in **Environmental Science** paper during B.H.M.S – 2nd Prof., as per instructions from the H. P. University, Shimla.

In order to get promoted in the next class, each student is required to obtain at least 50% marks in each subject.

Internship: Each candidate will have to undertake internship of twelve months of duration after passing the final Degree Examination at the Hospital / dispensary attached to the college as per the C.C.H. rules. On completion of the said internship only, candidate shall be recommended to the University for issuing of B.H.M.S. degree.

LIST OF TEACHING STAFF SUBMITTED BY THE COLLEGE

Sr.No.	NAME	DESIGNATION	QUALIFICATION
	Dr. N.P. Singh	Principal-cum-Professor	D.H.M.S. B.H.M.S (GDC)
Department of Anatomy			
1.	Dr. Archana Dviwedi	Professor	M.D (Hom.)
2.	Dr S. C. Gautam	Asstt. Professor	M.D (Hom.)
3.	Dr. Ravi Kant Sood	Associate Professor	M.B.B.S
Department of Physiology			
4.	Jatinder Sharma	Associate Professor	B.H.M.S
5.	Dr. Vineet Kumar	Asstt. Professor	B.H.M.S.
6.	Dr. Sunil K. Trivedi	Asstt. Professor	B.H.M.S
7.	Dr. Maneesh Tripathi	Asstt. Professor	B.H.M.S
8.	Dr. Amit Masad	Associate Professor	B.H.M.S
Department of Homoeopathic Pharmacy			
9.	Dr. Rashmi A. Jain	Associate Professor	M.D. (Hom)
10.	Dr. Avnish Kumar	Assistant Professor	B.H.M.S
Department of Homoeopathic Materia Medica			
11..	Dr. Krishna Saha	Professor	M.D (Hom.)
12.	Dr. Ankit Dubey	Associate Professor	M.D (Hom)
13.	Dr. Tarun Rajput	Asstt. Professor	B.H.M.S
14.	Dr. Anirudh Kr. Singh	Asstt. Professor	B.H.M.S
15.	Dr. Santosh Kr Thind	Asstt. Professor	B.H.M.S
Department of Organon of Medicine			
16.	Dr. N.P. Singh	Principal-cum-Professor	D.H.M.S.,B.H.M.S (GDC)
17.	Dr. Subendra Paul	Asstt. Professor	B.H.M.S
18.	Dr. Vinod Kr. Negi	Asstt. Professor	B.H.M.S
19.	Dr. Pankaj Upadhyay	Asstt. Professor	B.H.M.S
20.	Dr. Ravi Kant	Associate Professor (PT)	M.D (Hom.)
Department of Pathology and Microbiology			
21.	Dr. Rajnesh Sharma	Professor	M.D (Hom.)
22.	Dr. Raja Revatkar	Asstt. Professor	B.H.M.S
23.	Dr. Amit Kumar	Associate Professor (PT)	MD
24.	Dr. H.L.Gupta	Associate Professor	MBBS/MD
Department of Forensic Medicine & Toxicology			
24.	Dr. Sukhdeep Kaur	Associate Professor	B.H.M.S
25.	Dr. Nishant Kumar Shrivasta	Associate Professor	MD

26.	Dr. Ankush Upneja	Associate Professor	MBBS
Department of Surgery			
27.	Dr. Pawan Dviwedi	Professor	M.D (Hom.)
28.	Dr. Virendra Singh Khichee	Asstt. Professor	B.H.M.S
29.	Dr. Neeraj Sood	Associate Professor(P.T.)	M.B.B.S & M.S
30.	Dr. Manu Sharma	Associate Professor	BDS
Department of OBS./Gynae			
31.	Dr. Anjoo Singh Raginee	Associate Professor	M.D (Hom.)
32.	Dr. Sonia Parmar	Asstt. Professor	B.H.M.S
33.	Dr. Maya Ahuja	Associate Professor (PT)	M.B.B.S & M.D.
Department of Community Medicine			
34.	Dr. Vandana Sharma	Associate Professor	DHMS MD(Hom)
35.	Dr. Vinay Masand	Asstt. Professor	B.H.M.S
36.	Dr. Sonia Kapoor	Asstt. Professor	B.H.M.S
37.	Dr. Indu Prakash Patel	Asstt. professor	B.H.M.S
38.	Dr. H.S.Ahuja	Associate Professor	MBBS & M.D.
39.	Dr. Anita Sood	Associate Professor	MBBS & DMRD
Department of Case Taking and Repertory			
40.	Dr. Gurpreet Kaur	Professor	M.D. (Hom)
41.	Dr. Shail Dubey	Associate Professor	M.D (Hom.)
42.	Dr. Guman Singh Kangee	Asstt. Professor	B.H.M.S
43.	Dr. Ajmer Singh Toor	Associate Professor	MD(Hom)

Duration of B.H.MS Degree Course: Five and a half years, including 12 months of compulsory internship. English is the medium of instructions & examinations.

Annual Charges:

- 1) **Tuition Fee:** Rs.65,000/- (Rs. Sixty five Thousand only) Fee once paid is not refundable under any circumstances. This fee is subject to modification as per instructions from Government of Himachal Pradesh from time to time. If a candidate withdraw his/her admission after counselling but before cut of date admission,50% of the tuition fee shall be refunded by the college.
- 2) **Medical Fund:** Rs.500/- (Rs. Five hundred only)
- 3) **Library Fund:** Rs.500/- (Rs. Five hundred only)
- 4) **Lab Maintenance Fund:** Rs.500/- (Rs. Five hundred only)

Note: Fee for subsequent years must be submitted before 10th July of each calendar year in a single installment.

Caution Money (One time, at the time of admission): Rs.10,000/- (Rupees Ten Thousand only) Refundable without interest at the time of completion of Course or after five and half years from the date of admission in case the candidate leaves the college before any reason before completion of the B.H.M.S Course.

Hostel Fee: (For girls students only) Rs.4,500/- (Rupees Four thousand five hundred only) per month including boarding & lodging. An advance of six months is to be deposited on

confirmation of admission. This facility is available on first serve basis. In case a student leave before completion of the BHMS Course, he /she is liable to pay the entire course fee.

Fee for Clinical Training in Regional Hospital, Solan during B.H.M.S 3rd Prof. Rs.10,000/- (Rs. Ten Thousand only) will be charged extra. It is subject to revision as amended by Himachal Pradesh Government from time to time.

APPENDIX A-1

FORM OF CERTIFICATE OF BONAFIDE HIMACHALI IN RESPECT OF THE FATHER/GUARDIAN OF THE CANDIDATE.

Certified that ShriFather/Guardian of Shri/Kumari (Name of the candidate)..... occupation.....resident of village..... Post Office.....Tehsil..... District....Himachal Pradesh is a bonafide Himachali.

- (i) Having his permanent home in HP; or
- (ii) Residing in H.P. for a period of 20 years or above; or
- (iii) Having his permanent home in Himachal Pradesh but living outside Himachal Pradesh on account of his occupations.

Certified that I have satisfied myself on all facts documentary evidence forwarded by the candidates parents to the best of my ability and knowledge and found the same to be correct.

Place :

Date :

Signature of the Competent Authority

Issuing the certificate (with stamp).

Seal of the Court

Note:

1. Certificate in respect of guardian will be accepted if candidates father is not alive and the candidate is solely dependent on the guardian, the relationship of the candidate with the guardian should be stated.
2. The adoption deed in original duly registered in the Court in the year in which the candidate was adopted by the legal guardian will only be valid as per law.
3. The certificate should be fresh of the year in which admission is applied for.
4. Doubtful certificates will be got verified through the intelligence source and if found wrong, will render the student liable to expulsion and suitable legal action.

**APPENDIX A-2 [GROUP I & III]
CERTIFICATE OF BELONGING TO SCHEDULED CASTES/SCHEDULED TRIBES**

This is to certify that Shri/Kumari..... son/daughter/adopted
son/adopted daughter of Shri.....of village..... Post
Office.....Tehsil.....District.....State.....
belongs to the..... community (community must be indicated) which is recognised
as Scheduled Caste/Tribe for Himachal Pradesh under the Constitution (Scheduled Castes) (Union Territories)
Order, 1951, and as amended from time to time.
As such Shri.....and/or his family ordinarily reside(s)in
the..... District of Himachal Pradesh.

Seal of the Court

Place.

Signature
•Designation with seal of office of certificate
issuing authority

Date.....

* The certificate (Form given above) should be signed by Sub-Divisional Magistrate/Executive Magistrate (Tehsildar) of the area concerned to which the father/guardian of the candidate belongs. It should be signed and not counter signed.

Note: Doubtful certificates will be got verified through the intelligence source and if found wrong, will render the student liable to expulsion and suitable legal action.

APPENDIX A-3 [GROUP I]

CERTIFICATE OF BELONGING TO OTHER BACKWARD CLASSES

This is to certify thatson/daughter of

Shri.....resident of village P.O.

Tehsil.....District.....(H.P.) community which is recognised as Other

Backward Class in Himachal Pradesh by the State Government Vide notification No.

.....Dated..... Shri/Smt. and his/her family

ordinarily reside(s) in the District Division of the (H.P.) State.

This is also certified that he/she does not belong to the person/sections (Creamy Layer) mentioned in the Schedule.

Seal of the Court

Signature of the Sub-Divisional Magistrate/
Tehsildar/Executive Magistrate of the
illaqua with stamp.

Place

Date.....

1. The certificate as given above may be issued after verification from Revenue Records. Certificate issued by other authority will not be valid.
2. Doubtful certificate will be got verified through the intelligence source and if found wrong will render the student liable to exclusion and suitable legal action

APPENDIX A-4 (GROUP 1)

CERTIFICATE OF BELONGING TO BACKWARD AREA

Certified that Shri/Kumari..... son/daughter of Shri.
..... Ordinarily resides in Gram Panchayat.....Development Block
..... Tehsil..... District.....of Himachal Pradesh
which has been notified as a Backward Area vide Himachal Pradesh Government notification No
..... dated..... and has passed at least two examinations out of four
i.e.Primary/Middle/Matric/+2 from the institutions located in the notified Backward Area

“Note: Indicate name of the Backward area as per notification.

Seal of the Court

Signature

.....

“Designation with seal of the office of
Certificate Issuing Authority

Place :;

Date :

* The certificate Format given above should be signed by Sub-Divisional Magistrate/Executive Magistrate (Tehsildar) of the area concerned to which the father/guardian of the candidate belongs. It should be signed and not countersigned.

** Candidate(s) claiming seats against back ward area should fulfil one of the condition as laiddown below the distribution of seats at page 1 and 2 of the Prospectus.

"The Backward areas as listed In the notification No. PLG-F(BASP)-1/95 dated the 16th June, 1995 issued by the Financial Commissioner-cum-Secretary (Planning) Government of Himachal Pradesh or area as may be notified to be Backward areas by the Government of Himachal Pradesh from time to time."

Note: Doubtful certificates will be got verified through the intelligence source and if found wrong, will render the student liable to expulsion and suitable legal action.

APPENDIX A-5 GROUP 1

**FORM FOR CERTIFICATE TO BE PRODUCED BY THE EX-SERVICEMEN WHO ARE
BONAFIDE RESIDENTS OF HIMACHAL PRADESH**

Certified that Shri Father/guardian of Shri/Kumari (name of the
candidate..... resident of villagePost Office.....
Tehsil..... District of Himachal Pradesh was a member of
Defence Services. He served. (Bn- Regiment) and is a
bonafide resident of Himachal Pradesh,

Seal

Signature of

the Officer (with stamp)

Place:.....

Date:.....

Note: The certificate (Form as given above) should be signed by the Deputy Secretary (Defence) Govt. of India or the Commanding Officer concerned

APPENDIX A-6 (GROUP I)

FORM OF CERTIFICATE TO BE PRODUCED BY THE DEFENCE SERVICES PERSONNEL

Certified that ShriFather/guardian of Shri
/Kumari.....(name of the candidate) resident of
Village..... Post Office
Tehsil..... District..... of Himachal Pradesh is a
member of Defence Services, serving as(rank) in
Bn./Regimentis at present posted at(Station)
..... (State).....

Seal

Signature of the Officer,(with stamp)

Place :

Date :

Note: The certificate (Format given above) should be signed by the Deputy Secretary(Defence) Government of India or the Officer Commanding concerned.

APPENDIX A -7 (GROUP-I)

CERTIFICATE TO BE PRODUCED BY THE WARDS OF FREEDOM FIGHTER HAILING FROM HIMACHAL PRADESH

Certified that Shri/Smt..... Father/Mother/Grand father/Grand mother of
Shri/Kumari(Name of the candidate)resident of Village
.....TehsilDistrictof Himachal
Pradesh has been declared as a Freedom Fighter vide Himachal Pradesh Government Letter
No.....dated.....(Photostat copy attested be attached).

Seal of the Court

Signature of the District Magistrate (with stamp)

Place :

Date :

1. The certificate (Format given above) should be signed by the District Magistrate of the district concerned to which the parents/grand parents of the ward belongs as per the instructions given in the Prospectus.
2. An attested Photostat copy of such recognition granted to Freedom fighter be attached with the application form no 2 at the time of counselling.
3. Doubtful certificates will be got verified through the intelligence source and if found wrong, will render the student liable to expulsion and suitable legal action.

APPENDIX A -8
FORM OF CERTIFICATE TO BE PRODUCED BY THE
PHYSICALLY HADICAPPED

Certified that Shri/Smt S/o / D/o Shri
.....resident of VillagePost Office
..... Tehsil Districtof Himachal Pradesh
is physically handicapped with the locomotary disorder and that too with disability of lower
limbs between 51% to 70% or 40% to 50% (Please mention the percentage in figure and words)
.....

Signature
Designation with seal of the issuing authority

Place :
Date :

Note :

1. This certificate should be signed by the State Medical Board .
2. Doubtful certificates will be got verified through the intelligence source and if found wrong, will render the student liable to expulsion and suitable legal action.

APPENDIX A-9

STANDARD OF PHYSICAL FITNESS FOR ADMISSION TO BAMS/BHMS COURSE

1. **Eyes:**
 - (a) The absence of one eye shall not be a bar, the vision of remaining eye shall not be less than 6/9 with or without glasses.
 - (b) The minimum vision in person in possession of both eyes will be 6/12,6/18 with or without glasses.
 - (c) There shall be no disease adversely effecting the vision and no colour blindness.
2. Ears: The hearing power shall be such as to enable a candidate to use his stethoscope effectively
3. Blood pressureNormal
4. Heart.....No organic disease.
5. Lungs.....No organic disease.
6. Liver, spleen Kidney and lymphatic glands.....No permanent abnormality.
7. Nervous system.....No abnormality and candidate should be mentally sound.
8. Urine.....Free from albumen or sugar.
9. Extremities.....
 - (a) Any one with bad deformity or any absent limb shall be debarred.
 - (b) There shall be no deformity of lower limbs or spine to hinder normal locomotion.
10. Every candidate should have X-ray screening of the chest to exclude pulmonary cardiology.
11. Female candidates should be examined by the Gynecologists to exclude any organic disease.

APPENDIX A - 10

**AFFIDAVIT TO BE SUBMITTED BY THE STUDENT FOR
NON-INDULGENCE IN RAGGING**

I, Mr/Miss
Son/Daughter of Shri..... Resident of village
..... Post Office.....Tehsil
..... District..... State

..... appearing for admission to BAMS First Professional Year of Rajiv Gandhi Govt. Post Graduate Ayurvedic College Paprola-Himachal Pradesh hereby solemnly affirm that if admitted I shall not indulge in any act of ragging, directly or indirectly causing Physical or Mental distress or damage to any student during my entire stay in this college. I also submit that I have been made aware of the Anti-Ragging guidelines of Hon'ble Supreme Court of India and State of Himachal. I further understand that provisions of Anti-Ragging guidelines and law are not only applicable in College Campus but are also applicable out side the Campus. I understand that if am found of indulging in any act of ragging or any complaint of ragging is received against me, I shall be liable to disciplinary action by the college authorities and punishment as per law. I further undertake to work for ragging free atmosphere inside and out side the college and shall report immediately to authorities if any such act comes in my notice.

1. I clearly understand that the meaning of ragging which include the perception or feeling of a fresh student that he/she has been
 - i. Made fun of, ridiculed or teased
 - ii. Made uncomfortable, awkward or embarrassed.
 - iii. Subjected to intimidation, verbal abuse or mental trauma.
 - iv. Subjected to undermining of dignity.
 - v. Asked to do something which he/she ordinarily would not do.
 - vi. Restrained from free movement.

2. That since the provisions are based on Orders of Hon'ble Supreme Court and directions of authorities including the affiliating University I will not receive any consideration or lenience from the institution authorities in this regards.

Signature of the candidate

Name of Candidate.....

Date:.....

APPENDIX A-11

**RAJIV GANDHI GOVERNMENT POST GRADUATE AYURVEDIC
COLLEGE-PAPROLA
FORM TO BE SUBMITTED BY THE PARENT/LEGAL/GUARDIAN OF STUDENT
AS ANTI-RAGGING UNDERTAKING**

I, Resident of village.....
Post Office Tehsil.....District
..... State..... Father/Mother/Legal Guardian of Shri
..... presently student of BAMS Professional
Year of Rajiv Gandhi Govt. Post Graduate Ayurvedic College Paprola-Himachal Pradesh
hereby give an undertaking that my Son/Daughter/ward shall not indulge in any act of ragging,
directly or indirectly causing Physical or Mental distress or damage to any student during his
entire stay in this college. I also submit that I have been made aware of the Anti-Ragging
guidelines of Hon'ble Supreme Court of India and State of Himachal. I further understand that
provisions of Anti-Ragging guidelines and law are not only applicable in College Campus but
also applicable to acts of ragging out side the Campus. I understand that if my
Son/Daughter/ward is found guilty of indulging in any act of ragging or any complaint of
ragging is received against my son/daughter, he/she shall be liable to disciplinary action by the
college authorities and punishment as per law. I further undertake to advise my
Son/Daughter/ward for working for ragging free atmosphere inside the college and out side the
college.

Signature of the Parent/Legal Guardian

Name.....

Date:.....

Received by Class In-charge with date

FORM NO. 1

Sr. No.....

**APPLICATION-CUM-ADMISSION FORM FOR ADMISSION TO BAMS COURSE
SESSION 2016-2017 IN RAJIV GANDHI GOVT.
POST GRADUATE AYURVEDIC COLLEGE, PAPROLA, (KANGRA) 176115
(To be submitted by the Candidate at the time of counselling)**

Order of Scrutiny Committee: (Not to be filled by the Candidate)

- (i) Eligible / Ineligible.....
- (ii) CategoryCovered under.....
- (iii) Group..... Covered under.....

Deficiencies if any ;

- 1.
- 2.
- 3.

Full Signature of Scrutiny Committee Member (s)

- 1. 2. 3. 4.

Affix your latest
Passport size
photograph duly
attested by the
Gazetted officer

(To be filled by candidate in his/her own hand writing)

- 1. Name of the candidate (in Block Letters).....
- 2. Father's Name (in Block letters).....
- 3. Guardians Name (if applicable).....
- 4. Result of BAMS Entrance Test 2015: (i)Roll No.....(ii)Marks obtained.....
(iii) Combined General Merit Rank..... (iv) Category Merit Rank.....
- 5. Category applied for:
(i) Group I (General/SC/ST/OBC/Backward Area/
Child of Ex-Servicemen/Child of Defence
Personnel/Ward of Freedom Fighter/Physically Handicapped
(ii) Group III (General/SC/ST).....
- 6. Examination Centre appeared: (Dharmshala/ Hamirpur/ Mandi/ Shimla).....
- 7. Sex: Male/Female.....
- 8. Date of Birth.....
- 9. Age as on 31st December, 2016..... Years..... Months..... days
- 10. Are you bonafide Himachali / Domicile of Himachal Pradesh (Yes/No).....

11. Address for correspondence (in block letters).....
Pin Code.....
 Tel No.(with STD Code)Mobile No.....
12. Permanent Home address (in block letters).....
Pin Code.....
 Tel No.(with STD Code)Mobile No.....
13. Have you passed two examination out of the following from the recognised School situated in backward areas of the State of Himachal Pradesh (i.e Primary/Middle /Matric / 10+2) (Yes / No)
(For Backward Area Candidates only)

Sr.No.	Examination Passed	Name of School with Tehsil and Distt.	Name of Board/ niversity
1.	Primary		
2.	Middle		
3.	Matric		
4.	10 +2		

14. Details of marks obtained in qualifying examinations (10+2) and also mention the name of the qualifying examination

Subject	Maximum Marks	Marks Obtained	Percentage of Marks obtained
English			
Biology			
Chemistry			
Physics			
Total			
Marks obtained in Sanskrit Exam (If applicable)			

15. Details of other equivalent qualifying examinations passed and also mention the name of the qualifying examination (if applicable).....

Examination Passed with percentage	Subject	Marks	Max. Marks	Board / University

16. Important documents to be attached with this form at the time of Counselling:

- i) A certificate of having passed qualifying examination (10+2) or equivalent as per eligibility conditions.
- ii) Matriculation/Higher Secondary Part-1 / Indian School Certificate showing the date of birth. No other certificate in respect of date of birth will be entertained.
- iii) A certificate of good conduct and character from the Principal of the School/College where the candidate studied last.
- iv) Certificate of passing the Primary, Middle, Matric & +2 School Examinations from the recognised institutions showing the place of institution located in the backward area(s) in the State of H.P. (in case of Backward Area Category).
- v) Certificate of passing the 10+2 or equivalent examination from the recognised institutions showing the minimum eligibility of securing 50% (or 40% in case of SC/ST/OBC) as the case may be in Physics, Chemistry, Biology.
- vi) H.P. Bonafide certificate as per format given in Appendix A-1
- vii) SC/ST/OBC/Children of Ex-servicemen/Defence Personnel./Ward of Freedom Fighter/ Backward Area/Physically Handicapped certificate as per format given in Appendix A-2 to A-8
- viii) Any other certificate you deem fit to be attached.
- ix) Bring the original certificates alongwith one attested Zerox copy of each certificate at the time of counselling.
- x) Admit card.

I certify that particulars as furnished by me as above are correct and are strictly as filled in online Application Form. In case any of them is found false, my candidature is liable to be cancelled and I shall have no claim for admission to the college on the basis of competitive test.

Signature of the applicant

Place: _____.

Dated: _____

I/We hereby certify that the above statement of particulars is true.

Signature of the Parents/Guardians

Signature of the Attester with Seal

FORM NO. 2

Sr. No.....

**HIMACHAL PRADESH UNIVERSITY,
SUMMER HILL SHIMLA-5
FORM FOR APPLYING FOR BHMS COURSE AT
SOLAN HOMOEOPATHIC MEDICAL COLLEGE & HOSPITAL, KUMARHATTI, DISTT. SOLAN
(H.P.)
ALONG WITH PHOTOCOPIES OF APPLICABLE DOCUMENTS
SESSION 2016-2017**

(NOTE: THIS FORM IS TO BE SUBMITTED BY THE DESIROUS CANDIDATES TO THE PRINCIPAL, SOLAN HOMOEOPATHIC MEDICAL COLLEGE & HOSPITAL, KUMARHATTI, DISTT. SOLAN (H.P.) – 173229).

1. Name of the candidate (in Block Letters).....
2. Father's Name (in Block letters).....
3. Result of BAMS/BHMS Entrance Test 2015: (i)Roll No.....(ii) Marks obtained.....
(iii) Combined General Merit Rank.....(iv) Category Merit Rank.....
4. Category
5. Sex : Male/Female Date of Birth.....
6. Age as on 31st December 2016..... Years..... Months..... days
7. Are you bonafide resident/Domicile of Himachal Pradesh (Yes/No),.....
8. Details of marks obtained in qualifying examinations (10+2) and also mention the name of the qualifying examination
9. Details of marks obtained in qualifying examinations (10+2) and also mention the name of the qualifying examination

Subject	Maximum Marks	Marks Obtained	Percentage of Marks obtained
English			
Biology			
Chemistry			
Physics			
Total			
Marks obtained in Sanskrit Matric (If applicable)			

10. Address for correspondence (in block letters).....
.....
.....Pin Code..... Tel No.(with STD Code)
11. Permanent Home address (in block letters).....
.....
.....Pin Code.....

Signature of Parents

Signature of Candidates

Note : This form be submitted to the Principal Solan Homoeopathic Medical College, Kumarhatti, Distt. Solan by the Candidate desirous to take admission in above College on the basis B.A.M.S./B.H.M.S. Entrance Test 2015 so as to reach them by 06.08.2015.

OMR ANSWER SHEET

PMT (BAMS)

Sheet Number

Question Booklet No. :

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

Roll No. in words : TWENTY THREE THOUSAND FIVE HUNDRED AND SIXTY SEVEN
(In Block Letters)

Name of Candidate : ROHIT KUMAR
(In Block Letters)

Father's Name : RAMESH KUMAR
(In Block Letters)

Name of Examination Centre :

Space for Stamping

1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
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125	A	B	C	D
126	A	B	C	D
127	A	B	C	D
128	A	B	C	D
129	A	B	C	D
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135	A	B	C	D
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137	A	B	C	D
138	A	B	C	D
139	A	B	C	D
140	A	B	C	D
141	A	B	C	D
142	A	B	C	D
143	A	B	C	D
144	A	B	C	D
145	A	B	C	D
146	A	B	C	D
147	A	B	C	D
148	A	B	C	D
149	A	B	C	D
150	A	B	C	D

Rohit Kumar

Signature of Candidate

Signature of Invigilator

IMPORTANT INSTRUCTIONS

- (i) Write the Roll No. carefully on the OMR Answer Sheet and darken the appropriate circle / oval properly.
For Example : Roll No. 23567 be written as follows :

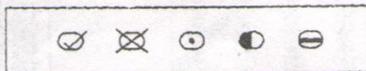
6	1	3	4	5	6	7
0	0	0	0	0	0	0
1	●	1	1	1	1	1
2	2	2	2	2	2	2
3	3	●	3	3	3	3
4	4	4	●	4	4	4
5	5	5	5	●	5	5
●	6	6	6	6	●	6
7	7	7	7	7	7	●
8	8	8	8	8	8	8
9	9	9	9	9	9	9

- (ii) The candidate should write the name of Subject choice out of Biology and Maths.
 (iii) Darken the appropriate circle in Subject as per his / her subject choice.
 (iv) Use Blue / Black Ink Ball Pen only to darken the appropriate circle / oval in the OMR Answer Sheet.
 (v) Darken one circle / oval deeply for each question in the OMR Answer Sheet, as faintly darkened, half darkened circle / oval might be rejected by the Optical Scanner.

Wrong Marking

Correct Marking

For Example :



- (vi) Darkening of more than one circle / oval shall be rejected by the scanner.
 (vii) Do not fold the OMR Answer Sheet nor put any mark here and there to avoid rejection by the Optical Scanner.



HIMACHAL PRADESH UNIVERSITY CAMPUS (LIBRARY), SHIMLA, H.P.



Solan Homoeopathic Medical College & Hospital, Kumarhatti (Solan), H.P.

**From:
Controller of Examinations
H.P. University, Summer Hill,
Shimla – 171 005**