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Reforms in the process and procedure in the conduct of evaluation/examination; including Continuous Internal Assessment to improve the examination system-

SBV has initiated various reforms by integrating Information technology into the pre-examination, examination and post-examination processes, resulting in the complete automation of the examination wing and early declaration of results.

==Examination procedures & Processes integrating IT==

- *Pre-examination procedures* - Earlier, question papers were received manually as hard copies. Considerable time was spent in transferring information in to soft copies resulting in considerable time delay. Hence, ==to minimize time delay and ensure safety, Question paper (QP) sets are being received online from subject experts through email in encrypted form==(Figure 1).

==After receiving these QPs, subject experts scrutinize them (Figure 2) to validate the technical correctness and suitability of the QP as per the blueprint.== Digital Scrutiny of MCQ question papers and theory question papers has been initiated at SBV. The QPs are sent to off- campus site in encrypted form ½ hour before exams. SBV Garuda Examination management system is used at SBV to carry out registration of candidates and hall tickets generation.

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Figure 1. Screenshot of encrypted question paper set

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Figure 2. Screenshot of the form for obtaining feedback on question paper setting and acknowledgement obtained from the scrutiny board members.

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Examinations

REVIEWERS REPORT

Subject: Course: Year:

REVIEWER'S FEEDBACK ON QP SETTING	(Yes/No)
1. COMPLIANCE: Are the Questions set in accordance to the Syllabus, Blueprint, university and MCI/DCI/INC regulations?	
2. SCOPE: Are the questions within the scope of Standard text books & Learning resources?	
3. APPROPRIATENESS: Are the Questions clear & unambiguous and technically correct?	
4. DIFFICULTY: Does the question paper contain majority of questions with moderate difficulty level, with a certain percentage of basic and higher order questions?	
5. TIME: Would a learner be able to complete the paper within the allocated time?	
6. MARKINGS: Is Split-up of marks clearly shown in a multi-part question?	
Overall grading of QP setting: Excellent/Good/Average/Poor	
Comment on Blueprint (if any):	

REVIEWERS ACKNOWLEDGEMENT-

I have scrutinized the QP sets and I assure that after my scrutiny, the QP sets are technically correct, in accordance with the blueprint, compliance with the _____ the regulations set by SBV and relevant regulatory bodies. _____ QP sets are of same level of difficulty and can be used for both _____ lementary batches.

3

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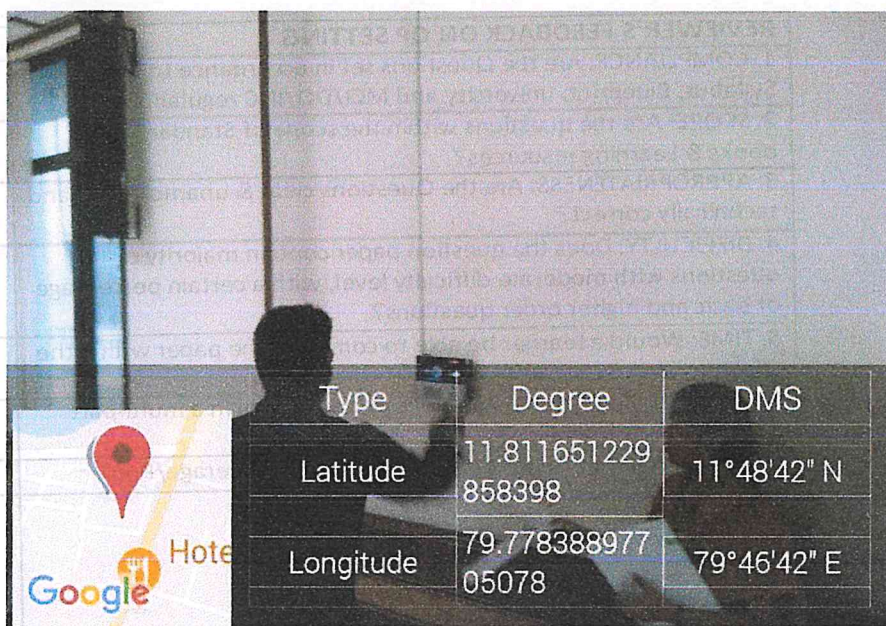
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- *Examination procedures*- Examination halls are well equipped with CCTV cameras, mobile jammers, and biometry of candidates is done before entry in to them (Figure 3, 4,& 5). Bar coded evaluation answer booklets have been introduced to ensure masking of student identity and to ensure unbiased evaluation.

Figure 3. Photograph showing biometry of candidates before entry in examination hall

Type	Degree	DMS
Latitude	11.811651229 858398	11°48'42" N
Longitude	79.778388977 05078	79°46'42" E

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![Sri Balaji Vidyapeeth logo]

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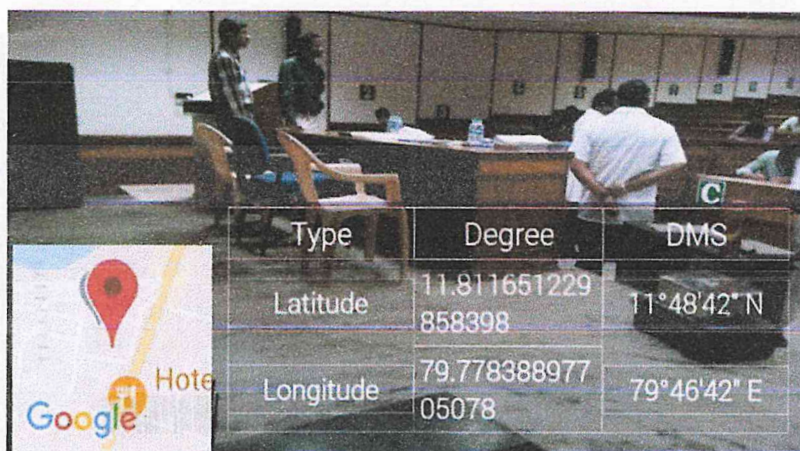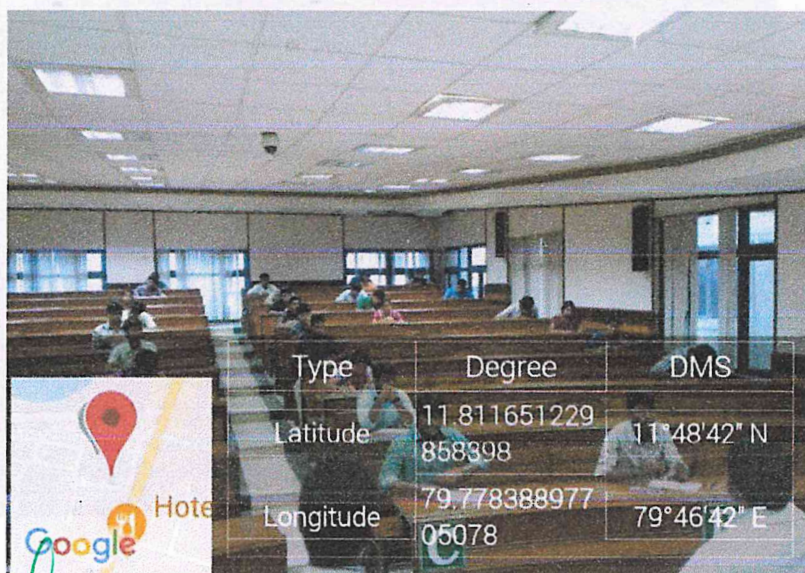Figure 4. Photograph showing use of mobile jammer in examination hall

Type	Degree	DMS
Latitude	11.811651229 858398	11°48'42" N
Longitude	79.778388977 05078	79°46'42" E

Figure 5. Photograph showing use of CCTV camera in examination hall

Type	Degree	DMS
Latitude	11.811651229 858398	11°48'42" N
Longitude	79.778388977 05078	79°46'42" E

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Figure 6. Screenshot of the first-page of the bar-coded answer booklets containing student Information (i.e. UIN, Candidate signature) and examination details (i.e. examination code, date of examination and invigilator's signature).

Figure 7. Screenshot of the evaluation sheet of the bar-coded answer booklets showing areas for entering marks for each question by the evaluator.

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- *Post-examination procedures-* At SBV, a unique initiative in UG courses has been in place to reduce bias of subjective variation during evaluation by allowing evaluation of a particular section of QP by a particular examiner for all candidates. Consequently, each answer booklet is evaluated by 4 examiners.

- PhD theory papers are being evaluated online from academic year 2019-20 onwards. Scanned answer papers in encrypted PDF format are provided to the examiners with corresponding passwords and marks tabulation sheet (Figure 9). The duly filled marks tabulation sheets are received from the examiners in both softcopy (scanned copy of the original signed document) by email and hardcopy by post. Practical examinations are conducted strictly, as per the stipulations of the regulatory agencies like MCI, DCI, INC and PCI.Uploading of practical examination marks is done online using SBV Garuda.

Figure 8. Screenshot of an email sent to examiner for online evaluation

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Figure 9. Screenshot of valuation sheet received online (email) from an examiner

- <mark>Optical mark recognition (OMR) system is used for extracting theory examination marks and for MCQ responses by using *Verificare software*.</mark> (Figures-10 and 11). This enables faster processing of marks and also enables Question-wise post-validation analysis. Results are released within 10 days of completion of an examination. SBV Garuda EMS is used for releasing results (Figure 12). Introduction of On-screen evaluation of answer scripts and providing access to answer scripts for undergraduate students

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Figure 10. Screenshot showing the process of scanning of evaluation sheet of theory answer booklets.
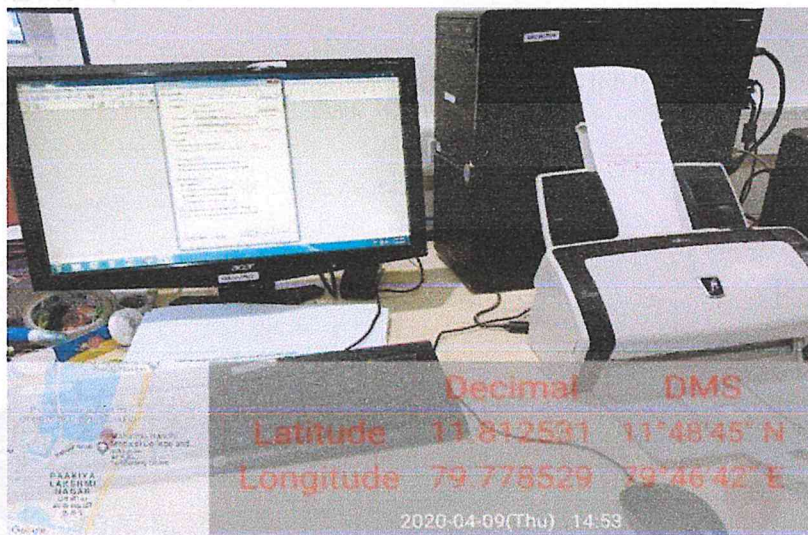
Figure 11. Screenshot showing the process of scanning of MCQ answer sheets
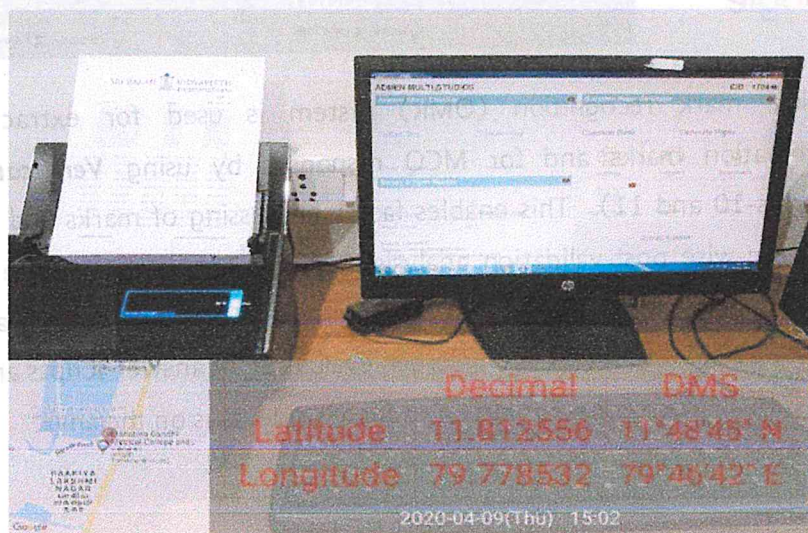
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Figure 12. Screenshot showing the SBV Garuda portal where students can access their examination results online after release of the results.
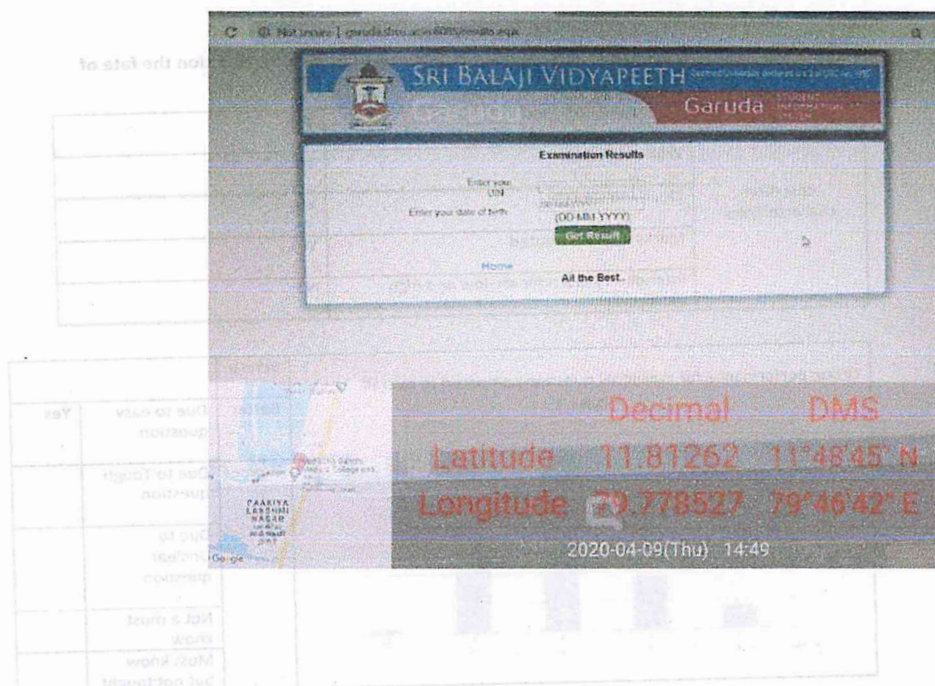
Following release of results, the examination wing prepares question –wise performance of candidates in each theory paper in a graphical format in along with specific comments, if any,on the nature of the graph, such as shift to the left, central tendency and bimodal curve. These graphical data on students' performance are sent by the examination wing, SBV to the respective heads of institutions to conduct post-validation with the help of concerned departments (Figure 13). The consolidated report of the post-validation are maintained at the office of the institute heads and IQAC. This initiative has been introduced across the UG Dental & Nursing courses at SBV.

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Figure 13. Screenshot showingpost-validation analysis for a question (Q1) of BDS pathology paper.

LAQ- 1 Define thrombus. Explain the etiopathogenesis of thrombus. Mention the fate of thrombus

Question characteristics	From the must know	Yes
	Well structured	Yes
	Clear and specific	Yes
	Marks well distributed	Yes
	Intended to discriminate low and high performer	No

Group performance for individual question compared to overall
Q.No. 1
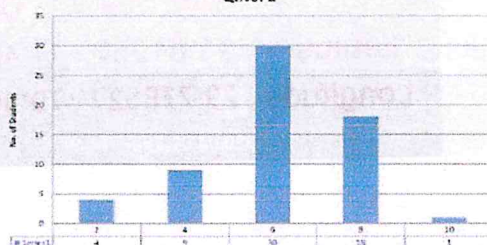
Similar		
Better	Due to easy question	Yes
Worse	Due to Tough question	
	Due to Unclear question	
	Not a must know	
	Must know but not taught	

Recommendations	Examiner to be sensitised or changed	-
	Paper setter to be sensitized or changed	-
	Remedial required for system error	-
	Question to be removed from bank	-
	Question to be retained in the bank	Yes
	Question to be modified	
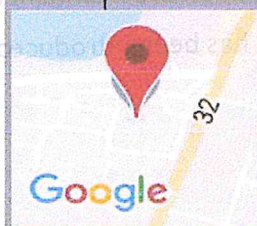
Type	Degree	DMS
Latitude	11.812100274 19371	11°48'44" N
Longitude	79.778115693 47978	79°46'41" E

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- A system of Continuous internal assessment and Competency-based assessment is in place at SBV.

- Choice Based Credit System (CBCS) with continuous internal assessment has been initiated in the undergraduate Allied health science programmes at SBV (Figure 14).

- SBV has introduced a unique Competency Based Learning and Training Model (COBALT) for setting high standards in Post Graduate Medical Education in India and also to ensure that the trained postgraduates function independently as specialists, researchers or medical teachers on course completion. Here, each Entrusted Professional Activity (EPA)is mapped to appropriate domains of competency and the level of competency to be attained at the end of 1st, 2nd and 3rd years of Postgraduate degree course (and at the end of 1st and 2nd years of Postgraduate Diploma Course) are defined.The residents do a self-assessment of EPAs at the time of joining. The faculty assesses at the end of every 3 months for the first year and every six months thereafter, to document the student's progress.This approachprovides opportunities for a tailored intervention based on individual needs with attention given to both process and outcome (Figure 15).

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Figure 14. Screenshot showing the outline of Choice Based Credit System (CBCS) in BSc Allied Health Science programmes.

Common Syllabus for all First Year B.Sc.Allied Health Sciences

I-YEAR

CORE SUBJECTS
1. Anatomy
2. Physiology
3. Biochemistry
4. Pathology & Microbiology

ELECTIVES
Ability Enhancement compulsory course (AECC)
1. English

**Skill enhancement course (SEC) - Choose any TWO**
1. Good Laboratory Practices
2. Basic Life support
3. Basics of Hospital Management

Generic Elective Course (GEC) - Choose any ONE
1. Basics of Yoga & Practice
2. Counseling and Guidance
3. Lifestyle Disorders

B.Sc I YEAR B.Sc AHS COURSES

Faculty code	Category	Course title		Hours						Credits			
AHS	Core theory AECT	Subjects	Theory	Practical	Tutorials	Lab training	Total hours	Lecture(L)	Practical	Tutorials	Lab training	Credits
AHS	AECT-1	Anatomy	80		32			5		1		6
AHS	AECT -2	Physiology	80		32			5		1		6
AHS	AECT -3	Biochemistry	80		32			5		1		6
AHS	AECT -4	Pathology	40		16			5		1		6
AHS		Microbiology	40		16							
AHS	Lab training AECT 1 to 4					192					6	6
AHS	AECC	English	16	34				1	1			2
AHS	SEC - 1-3	Student's choice	16	32				1	1			2
AHS	SEC - 1-3	Student's choice	16	32				1	1			2
		Student's choice	64									4
			432	98			850	27	3	4	6	40
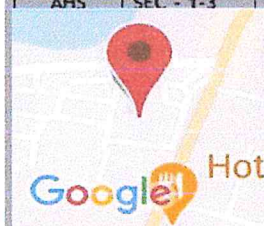
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Figure 15. Screenshot showing the progression of a medical postgraduate achieving required level of competency for various EPAsover the period of his training.

Epa

Posted by Anisha on 04 September 2019, 8:40 PM
Tags: epa

LEVEL OF COMPETENCY

S.No.	EPA	2019 Day 1 of residency	At the end of 1st month (June 1st)	At the end of 4th month (September 1st)	2020 Oct - Dec	Apr - Jun Q2	Jul - Sep Q3	Oct - Dec Q4	Jan - Mar Q1	2021 Apr - Jun Q2
1.	Gather a history and perform a physical examination	I	II	III						
2.	Prioritize a differential diagnosis following a clinical outcome	I	I	II						
3.	Recommend and interpret common diagnostic and screening tests	I	II	III						
4.	Enter and discuss orders and prescriptions	I	II	III						
5.	Document a clinical encounter in the patient record.	I	II	II						
6.	Provide an oral presentation of a clinical encounter			II						
7.	Form clinical questions and retrieve evidence to advance patient care.	I	I	I						
8.	Give or receive a patient handover to transition care responsibility	I	I	II						
9.	Collaborate as member of an inter professional team	I	II							
10.	Recognize a patient requiring urgent or emergent care and intiate evaluation and	II	II							

Type	Degree	DMS
Latitude	11.811651229858398	11°48'42" N
Longitude	79.77838897705078	79°46'42" E

Level ii. Can do under strict supervision   Level iii. Can do under loose

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Workplace-based assessment

Multi-source feedback (MSF)

- Multi-source feedback is the feedback obtained from different sources including patients, relatives and other health care professionals regarding EPAs which pertain to dealing with patients, their relatives or other healthcare workers, communication, attitude, professionalism etc. They form the basis of assessing the level of competency achieved by the student. SBV uses specially designed, contextually relevant evaluation forms for this purpose.

E-PORTFOLIO

- Residents will record all their activities regarding Patient-Care and Academics in an E-portfolio, on daily basis. The faculty supervisor will review this at regular intervals.

- A longitudinal view of the residents' work shows the growth, progress and continuity over a period of time, enabling the learner to present a profile of accomplishments based on evidence.

- The major components of an E-portfolio include-

  - Curriculum Vitae

  - Details of undergraduates training with achievements

  - Details of resident training

  - Patient care activities

  - Participation in Clinical governance and audit

  - Teaching learning activities (Journal Clubs, Seminars etc)

  - Critical incident reporting and reflection on these incidents

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- Participation in outreach activities, research academic publications, training courses and extra curricular activities.

- **Reflections** on these experiences form a major part of the e-portfolio (Figures- 16 and 17).

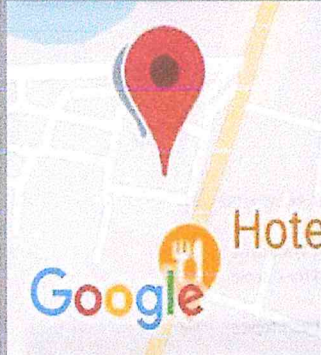Figure 16. Screenshot showing therecord ofdaily activities of a resident regarding Patient-Care in his/her E-portfolio.

Figure 17. Screenshot showing therecord of daily academic activities (e.g. journal club) of a resident in his/her E-portfolio.

A hands-on workshop on e-portfolio is conducted for all incoming residents to enable them to create and manage their e-portfolios effectively.

Self assessment

- Another major strength of e-portfolio is the emphasis on reflective practice, which is further supported by continuous feedback and mentoring by the supervisor with additional inputs from departmental colleagues.

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OSPE

- Conventional methods of practical examination are variable and subjective. Assessment drives learning and bears influence on the learning approaches adapted by the students. However, if a practical/clinical examination has to test this, it has to employ instruments that can generate valid, reliable, accurate data and are consistent and repeatable. It should be achieved within a given time period with training and necessary equipments. It should also be appropriate to the specific circumstances being measured. Hence, in an attempt to overcome subjectivity, objective structured practical examination (OSPE) is conducted for the various undergraduate courses (MBBS and BDS) in the departments like Biochemistry, MGMCRI.

- Skill to be tested is given in form of a specific question to be answered in 5 minutes. Each question is a station. For each question (station), a check list is prepared in advance. Check list is prepared by breaking the skill (to be tested) into its vital components and precautions to be observed (Figure 18).Three types of stations are kept- observed, unobserved and response stations. Students rotate round a number of stations (about 25) and spend a specified time (5 minutes) and when a bell is rung, the student moves to the next station. It is used both for summative and formative assessments.

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Figure 18. Screenshot of checklist for an OSPE exercise

OBJECTIVE STRUCTURED PRACTICAL EXAMINATION

NAME OF THE TEST: MOLISCH Test

PROCEDURE	Marks								
Takes 2 ml given solution in a clean dry test tube	1								
Add 2 or 3 drops of Molisch reagent	1								
mixes well	1								

Type	Degree	DMS
Latitude	11.803517999 307374	11°48'13" N
Longitude	79.776258263 73696	79°46'35" E

Verified and approved by:

Name: Dr. Srirangaraj S

Designation: Controller of Examinations, SBV

Date: 04.11.2020