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Ref No: DUHS/Reg./2026/09-29

Date: 05.09.2026

NOTIFICATION

Subject: Standard Operating Procedure Policy for Item Analysis of Multiple-Choice Questions

With the approval of the Vice Chancellor, the Standard Operating Procedure Policy for Item Analysis of Multiple-Choice Questions is hereby notified to all concerned for information and strict compliance with immediate effect.

Dr. Ashar Afaq
Registrar

Copy to:

1. All Principals of Medical and Dental Colleges / Institutes of DUHS.
2. All Principals of concerned affiliated Medical & Dental Institutions of DUHS.
3. The Director, Digital Learning Centre, DUHS.
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6. The Director, ICT, DUHS.
7. The Deputy Director, Digital Learning Centre, DUHS.
8. The Advisor to the Vice Chancellor, DUHS.
9. The Controller of Examinations, DUHS.
10. The Incharge Coord & Protocols to the Vice-Chancellor, DUHS.
11. The P.A. to the Pro-Vice Chancellor, DUHS.
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	Document Name:	Policy for Item Analysis of Multiple-Choice Questions
	Document Number:	DUHS / ED / SOP / 03

DOW UNIVERSITY OF HEALTH SCIENCES



STANDARD OPERATING PROCEDURE

Policy for Item Analysis of Multiple-Choice Questions

	NAME	DESIGNATION	SIGNATURE	DATE
PREPARED BY:	Dr. Syed Jaffar Abbas Zaidi	Deputy Director Digital Learning		22/07/2026
REVIEWED BY:	Dr. Fuad Shaikh	Advisor to Vice Chancellor		22/07/2026
APPROVED BY:	Prof. Dr. Nazli Hussain	Vice Chancellor DUHS		22/07/2026
REVISION NO.:	00			
DATE OF LAST REVISION:				
DATE OF ISSUE:				

Nazli Hussain



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- Registrar
- Controller Examination
- Principals of Medical and Dental Colleges



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LIST OF ABBREVIATIONS

Abbreviation	Full Form
BDS	Bachelor of Dental Surgery
DUHS	Dow University of Health Sciences
HEC	Higher Education Commission
HR	Human Resources
ICT	Information and Communication Technology
IE	Internal Evaluation
MBBS	Bachelor of Medicine, Bachelor of Surgery
MCQ	Multiple Choice Question
OSCE	Objective Structured Clinical Examination
PMDC	Pakistan Medical and Dental Council
QEC	Quality Enhancement Cell
SOP	Standard Operating Procedure



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1. PURPOSE

This policy establishes a standardized process for conducting item analysis of multiple-choice questions (MCQs). It ensures the validity and fairness of examination results. Furthermore, this policy aligns with the Pakistan Medical and Dental Council's (PMDC) standards for assessment and quality assurance.

2. SCOPE

- 2.1** This policy applies to all MBBS and BDS examinations at DUHS.
- 2.2** This policy covers the responsibilities of academic, administrative, and technical personnel involved in the examination process.

DATE OF IMPLEMENTATION: This policy will be effective from [Insert Date], and it supersedes any prior instructions about the conduct of online examinations where conflicts may arise

3. RESPONSIBILITIES

- 3.1.** The examination department will arrange for item analysis meetings, generate reports, and facilitate review meetings.
- 3.2.** The nominated faculty members will review flagged MCQs and provide appropriate recommendations.
- 3.3.** The Controller of Examinations/CoE will oversee the implementation of item analysis and result announcement.

4. PROCEDURE

4.1. General Requirements

- 4.1.1** The Examination Department, in coordination with ICT will ensure readiness of item analysis software, and train faculty on item analysis procedures.
- 4.1.2** Item analysis process will be conducted for all MCQs in theory exams for MBBS and BDS programs.

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4.2 The Item Analysis Procedure

4.2.1 The item analysis process will include generation of item analysis reports, identification of flagged MCQs based on difficulty index, discrimination index, and Cronbach's Alpha.

4.3 Criteria for flagging questions

4.3.1 Questions with a difficulty index of 0.2 or less will be flagged.

4.3.2 Questions with a discrimination index of 0.1 or less will be flagged.

4.3.3 Point by Serial from -1 to 0.1 will be flagged

4.3.4 Questions where the Cronbach's Alpha, if the item is deleted, is 0.01 or higher than the Cronbach's Alpha of the entire exam will be flagged.

4.4 Review and Decision Making

4.4.1 Review meetings will be conducted with faculty members of the concerned specialty, discipline, or subject.

4.4.2 A minimum of two faculty members is required for the review.

4.4.3 Based on the review, one of the following actions will be taken: retain the flagged MCQ as it is in the calculation of results, retain the flagged MCQ with a change of key (correct option) as per the reviewers' suggestion and recalculate the result, or remove the flagged MCQ from the calculation of results.

4.4.4 The decisions of the review meeting will be incorporated into the final results.

4.4.5 Result Announcement

4.4.6 Results will be announced after a one-week delay for review.

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5. RELATED DOCUMENTS:

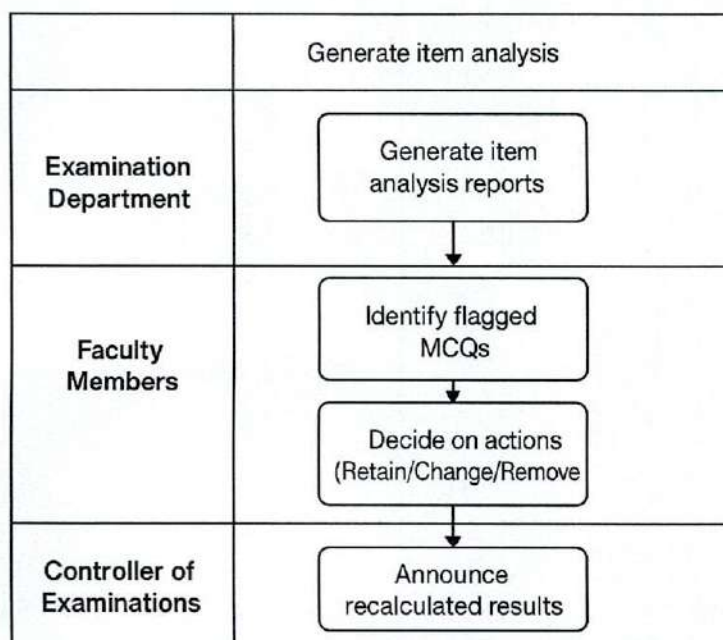
- Annexure A (Sample Item Analysis Decision Template)
- Annexure B (Workflow Diagram)

Annexure A (Sample Item Analysis Decision Template)

Item No.	Question Text	Difficulty Index	Discrimination Index	Cronbach's Alpha (if item deleted)	Flagged (Yes/No)	Action Taken
1	Sample Question 1	0.15	0.05	0.75	Yes	Remove
2	Sample Question 2	0.25	0.12	0.7	No	Retain
3	Sample Question 3	0.18	0.08	0.72	Yes	Change

Annexure B (Workflow Diagram)

Swim Lane Diagram of Item Analysis



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- **RELATED RECORDS**
- **Policy for Examinations and Online Assessment.**
- **Policy for Digital Learning Centre and Smart Classroom**