



The Key Steps to Construct an Assessment Blueprint

Organized by Impact and Frequency

Aligned to Knowledge, Skills, and Attitudes (KSA)

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3.1.2. The medical college must ensure that assessments cover knowledge, skills and attitudes.

Present

Use documents including a **blueprint covering the assessment of KSA**

Applied

Documents representing the application of the above criteria (KSA) in **all departments** of the college and in **all types of assessment**

Effective

Documents demonstrating the application of the above criteria for **all of subjects in all departments** of the college.

Mapping Learning Outcomes to KSA Domains

Medical Program Assessment	OSCE	OSPE	OSLER	MCQ	Log-book	Port- folio	Written Exam.	Quiz	Formative
Domain	Skills	Skills	Skills	Knowledge	Skills	Attitude	Knowledge	Knowledge	All domains

Define the Content Areas (or Learning Outcomes) Respiratory Module

Topics		Knowledge			Practice		Attitude	
Learning outcomes		Essay (Quizzes)	MCQ	Written	Lab	OSPE	Daily activities	Lab
1	Anatomy							
2	Histology							
3	Embryology							
4	Physiology							
5	Biochemistry							
6	Immunology							
7	Microbiology							
8	Virology							
9	Parasitology							
10	Pharmacology							
11	Pathology							

Content Area	Importance Impact (I)	Frequency (F)
Cardiovascular	3	3
Respiratory	3	2
Endocrine	2	2
Gastrointestinal	2	3
Infectious	3	2

Frequency Description
Basic / integrated

Convert lecture counts into Frequency scores

Content Group		No. of lectures
1	Anatomy & Histology	8
2	Physiology	11
3	Biochemistry	2
4	Immunology	4
5	Microbiology (Bacteria, virus, parasite)	11
6	Pharmacology	7
7	Pathology	9
TOTAL		52

Normalize lecture numbers into Frequency scores (1–3)

% of total module	Frequency score
$\geq 30\%$	3 (High)
15–29%	2 (Moderate)
$< 15\%$	1 (Low)

Group	Lectures	%	Frequency
Physiology	11	21%	2
Microbiology	11	21%	2
Pathology	9	17%	2
Pharmacology	7	13%	1
Anatomy & Histology	8	15%	2
Immunology	4	8%	1
Biochemistry	2	4%	1
Total	52	-	-

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graph LR; A[Calculate I x F  
(Impact x Frequency)] --> B[Calculate Total  
I x F Score]; B --> C[Convert I x F into  
Percentage Weights]; C --> D[Weight (%) =  
IxF for topic/  
IxF for all topics  
x100];
```

**Calculate $I \times F$
(Impact $\times$
Frequency)**

**Calculate Total
 $I \times F$ Score**

**Convert $I \times F$ into
Percentage
Weights**

**Weight (%) =
 $I \times F$ for topic/
 $I \times F$ for all topics
 $\times 100$**

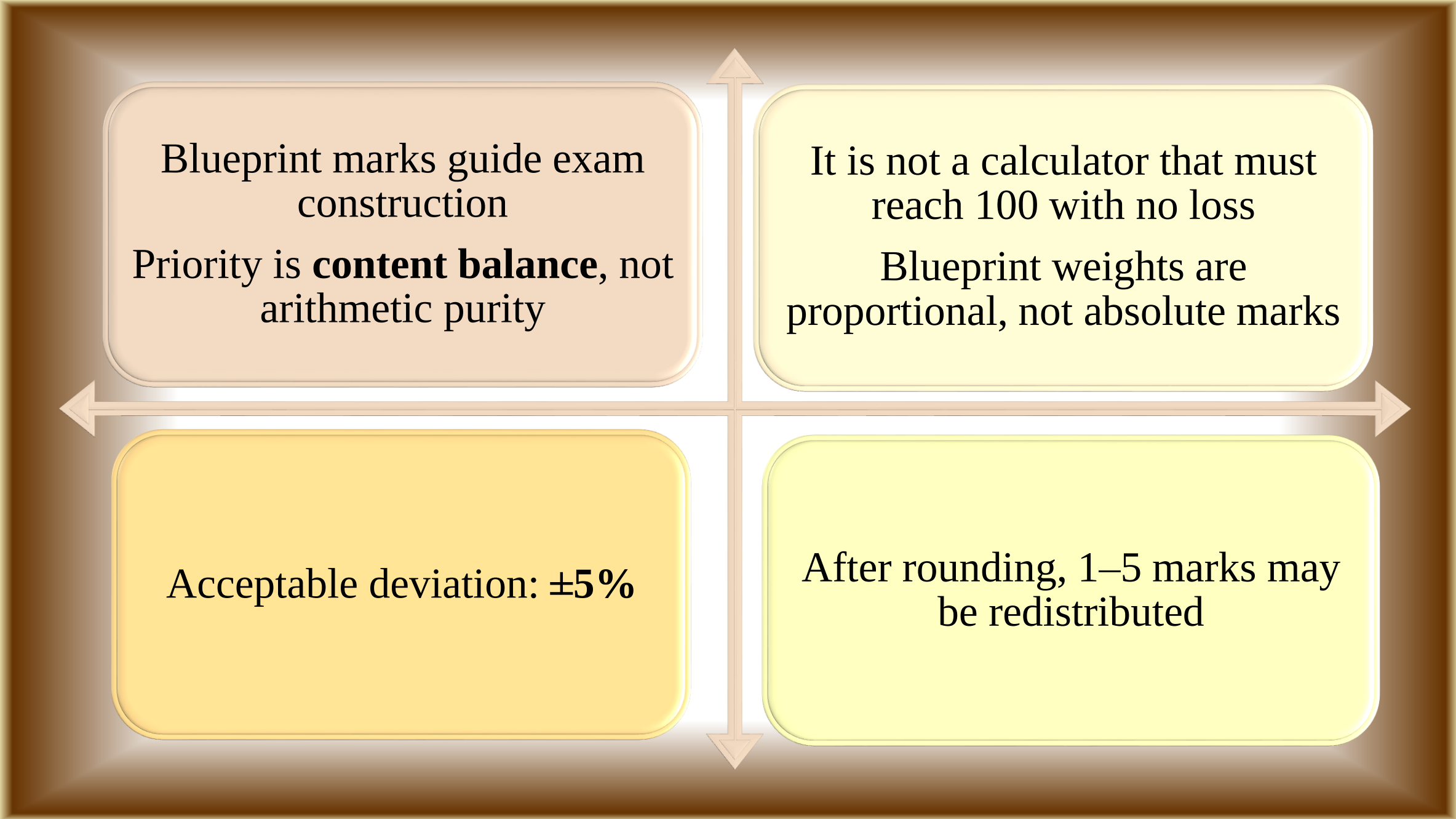
Percentage of Distribution for I × F per Category

No.	Topics	Importance (I)	Frequency (F)	I×F	Percentage / Category
1	Basic science in obstetrics	1	2	2	5%
2	Antenatal obstetric complications	3	3	9	24%
3	Medical diseases complicating pregnancy	3	3	9	24%
4	Labor; normal & abnormal & Fetal wellbeing	2	3	6	16%
5	Postpartum complications & puerperium	3	2	6	16%
6	Pre-pregnancy & early pregnancy diagnosis	1	3	3	8%
7	Procedures & drugs in obstetrics	1	3	3	8%
				38	

Medical diseases complicating pregnancy

Every assessment tool must reflect the 24% same proportion

	Tool	Total tool marks	Correct share Weight x mark	Rounded
Knowledge domain	MCQ	40	$0.24 \times 40 = 9.6$	10
	Essay	5	$0.24 \times 5 = 1.2$	1
	Matching	10	$0.24 \times 10 = 2.4$	2
Practice domain	Daily cases	4.5	$0.24 \times 4.5 = 1.08$	1
	Long case	11	$0.24 \times 11 = 2.6$	2
	OSCE	20	$0.24 \times 20 = 4.8$	5
	Slides	6	$0.24 \times 6 = 1.4$	1
Attitude domain	Daily activities	1.3	$0.24 \times 1.3 = 0.31$	0
	OSCE (attitude)	1.2	$0.24 \times 1.2 = 0.29$	0



Blueprint marks guide exam
construction

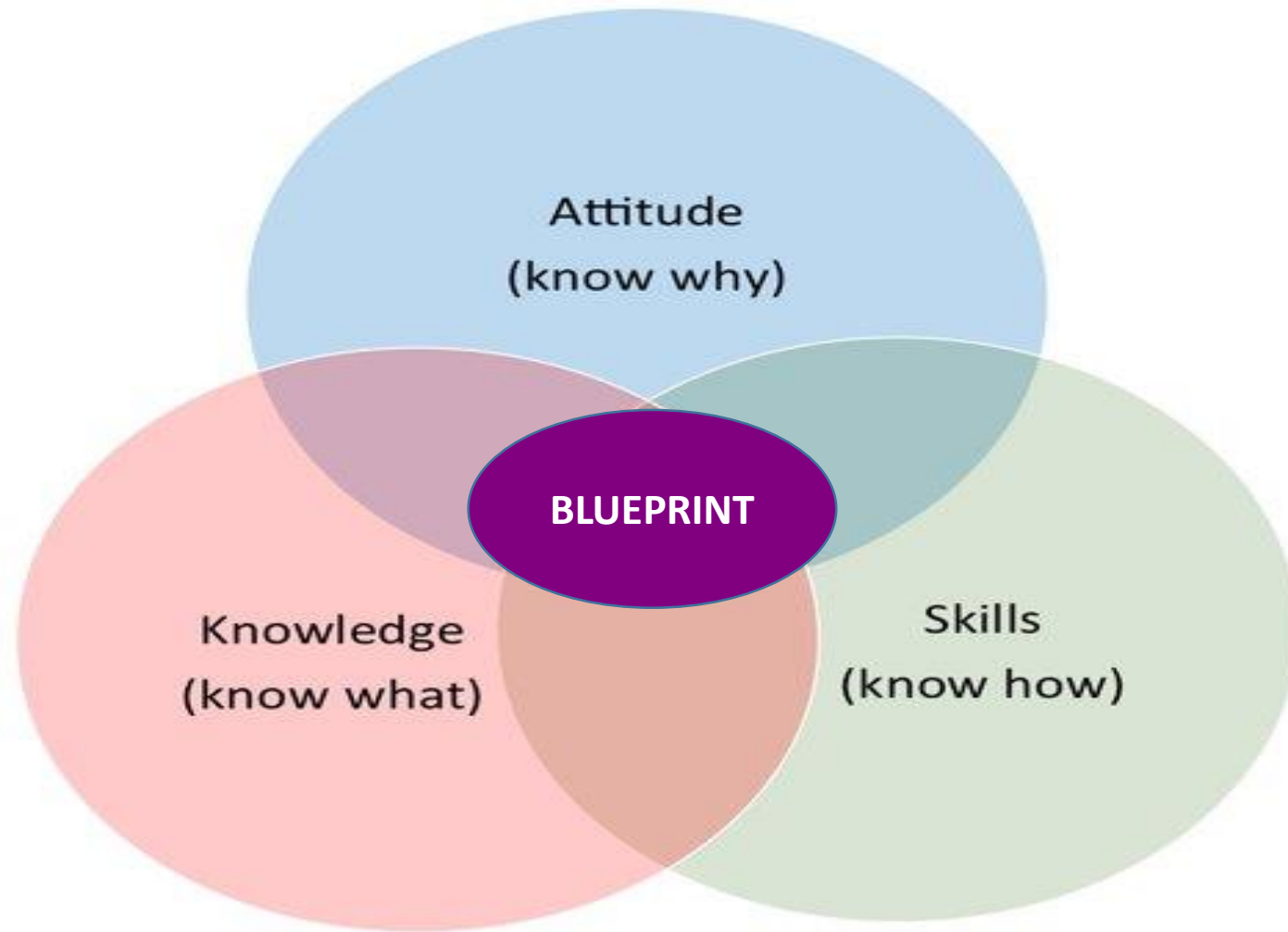
Priority is **content balance**, not
arithmetic purity

It is not a calculator that must
reach 100 with no loss

Blueprint weights are
proportional, not absolute marks

Acceptable deviation: $\pm 5\%$

After rounding, 1–5 marks may
be redistributed



No.	Topics (Learning objectives)	Importance (I)	Frequency (F)	IxF	Percentage ($I \times F / \text{Total}$) $\times 100$
1	Basic science in obstetrics	1	2	2	5
2	Pre-pregnancy & early pregnancy diagnosis	1	3	3	8
3	Antenatal obstetric complications	3	3	9	24
4	Medical diseases complicating pregnancy	3	3	9	24
5	Labor; normal & abnormal & Fetal wellbeing	2	3	6	16
6	Postpartum complications & puerperium	3	2	6	16
7	Procedures & drugs in obstetrics	1	3	3	8
				38	100

Topics Learning outcomes		Knowledge			Practice				Attitude		Total	%
		Essay (Quizzes)	MCQ	Match	Daily cases	Long case	OSCE	Slides	Daily activities	OSCE		
1	Basic science in obstetrics	0	2	0	0	1	1	0	0	0	4	5
2	Pre-pregnancy & early pregnancy diagnosis	0	3	1	0	1	2	0	0	0	7	8
3	Antenatal obstetric complications	1	10	2	1	3	5	1	0	0	23	24
4	Medical diseases complicating pregnancy	1	10	2	1	3	5	1	0	0	23	24
5	Labor; normal & abnormal & Fetal wellbeing	1	6	2	1	2	3	1	0	0	16	16
6	Postpartum complications & puerperium	1	6	2	1	2	3	1	0	0	16	16
7	Procedures & drugs in obstetrics	0	3	1	0	1	2	0	0	0	7	8
Approved marks		5	40	10	4.5	11	6	20	1.3	1.2		

