

Estd. : July, 1999

॥ प्रज्वलितो ज्ञानमय प्रदीपः ॥

UGC (2F & 12B) Dt. 16-8-2011
Perm. Aff. No. SU/AFFI/T-2/UMK/4818 Dt. 15-7-2010

Shri. Shahu Shikshan Prasarak Seva Mandal, Peth Vadgaon's



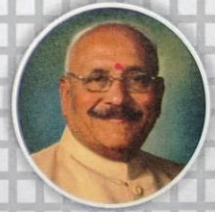
NAAC Accredited - 'B++' (2.83)
Aug. 2016

SHRI. VIJAYSINHA YADAV COLLEGE

PETH VADGAON

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2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

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Attainment levels:

For University Exam

Level 1	below 45 % Students scoring more than 60% marks
Level 2	45-60 % Students scoring more than 60% marks
Level 3	$\geq 60\%$ Students scoring more than 60% marks

For Internal Exam

Level 1	below 60 % Students scoring more than 60% marks
Level 2	60-80 % Students scoring more than 60% marks
Level 3	above 80% Students scoring more than 60% marks

Program outcome Level	Target Attainment (Exclusive Method)
Level 1	0.5- 1.0
Level 2	1.0 - 1.5
Level 3	1.5 -2.0
Level 4	2.0- 2.5
Level 5	2.5 -3.0

Target Attainment Level of all the Departments

Name of Department	Average Attainment of Course	Average attainment by indirect method	80% of Average attainment of Course (I)	20% of of Average attainment of indirect method (II)	Average PO Attainment (I+II)	Target Attainment Level
Physics	2.7	2	2.16	0.4	2.56	Level 5
Chemistry	2.6	1	2.08	0.2	2.28	Level 4
Botany	2.8	1	2.24	0.2	2.44	Level 4
Zoology	2.9	1	2.32	0.2	2.52	Level 5
Mathematics	3	1	2.4	0.2	2.6	Level 5
Computer Science	2.5	1	2	0.2	2.2	Level 4
Microbiology	2.3	1	1.84	0.2	2.04	Level 4
Marathi	2.76	1	2.20	0.2	2.40	Level 4
Hindi	2.2	1	1.76	0.2	1.96	Level 3
English	1.72	1	1.37	0.2	1.57	Level 3
Economics	2.04	1	1.63	0.2	1.83	Level 3
Geography	2.6	1	2.08	0.2	2.1	Level 4
Political Science	1.72	1	1.37	0.2	1.57	Level 3
Sociology	1.96	1	1.57	0.2	1.77	Level 3
History	2.68	1	2.14	0.2	2.34	Level 4

Department of Physics

Calculation for Program Outcome Attainment for the Year 2018-19 (B. Sc. III Physics)

Attainment of course outcome									
Semester (Theory)	Course Code (Paper No.)	Course Title	% of students above 60% Universit ymarks	Level of Attainment	80% of Attainmen t Level in endterm exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainmen tLevel in internal exam (II)	Attainmen tof Course (I+II)
Semester V (Theory)	Paper-IX	Mathematical & Statistical physics	38.46	1	0.8	100	3	0.6	1.4
	Paper-X	Quantum mechanics	69.23	3	2.4	100	3	0.6	3
	Paper-XI	Classical mechanics	76.92	3	2.4	100	3	0.6	3
	Paper-XII	Atomic, Molecular Spectra and Astronomy and Astrophysics	53.84	2	1.6	100	3	0.6	2.2
Semester VI (Theory)	Paper-XIII	Nuclear and Particle Physics	76.92	3	2.4	100	3	0.6	3
	Paper-XIV	Energy Studies and material Science	100	3	2.4	100	3	0.6	3
	Paper-XV	Electrodynamics & Electromagnetic Waves	84.61	3	2.4	100	3	0.6	3
	Paper-XVI	Energy studies Solid state Physics	84.61	3	2.4	100	3	0.6	3
								Total	21.6
								Average	2.7

Department of Chemistry
Calculation for Program Outcome Attainment for the Year 2018-19 (B. Sc. III Chemistry)

Attainment of course outcome									
Semester (Theory)	Course Code (Paper No.)	Course Title	% of students above 60% Universit ymarks	Level of Attainment	80% of Attainmen t Level in endterm exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainmen tLevel in internal exam (II)	Attainmen tof Course (I+II)
Semester V (Theory)	Paper-IX	Physical chemistry	42.55	1	0.8	100	3	0.6	1.4
	Paper-X	Inorganic chemistry	93.61	3	2.4	100	3	0.6	3
	Paper-XI	Organic chemistry	57.44	2	1.6	100	3	0.6	2.2
	Paper-XII	Analytical chemistry	91.48	3	2.4	100	3	0.6	3
Semester VI (Theory)	Paper-XIII	Physical chemistry	80.85	3	2.4	100	3	0.6	3
	Paper-XIV	Inorganic chemistry	93.61	3	2.4	100	3	0.6	3
	Paper-XV	Organic chemistry	51.06	2	1.6	100	3	0.6	2.2
	Paper-XVI	Analytical chemistry	78.72	3	2.4	100	3	0.6	3
								Total	20.8
								Average	2.6

Department of Botany
Calculation for Program Outcome Attainment for the Year 2018-19 (B. Sc. III Botany)

Attainment of course outcome									
Semester (Theory)	Course Code (Paper No.)	Course Title	% Of students above 60% Universit ymarks	Level of Attainment	80% of Attainmen t Level in endterm exam (I)	% Of students above 60% internal marks	Level of attainment	20% of Attainmen tLevel in internal exam (II)	Attainmen tof Course (I+II)
Semester V (Theory)	Paper-IX	Biology of Non-vascular Plants & Paleobotany	53.84	2	1.6	81.62	3	0.6	2.2
	Paper-X	Genetics & Analytical Techniques in Plant Science	61.53	3	2.4	89.74	3	0.6	3
	Paper-XI	Fundamentals of Plant Physiology & Ecology	84.61	3	2.4	89.74	3	0.6	3
	Paper-XII	Plant Biochemistry	61.53	3	2.4	100	3	0.6	3
Semester VI (Theory)	Paper-XIII	Biology of Vascular Plants	46.15	2	1.6	79.48	3	0.6	2.2
	Paper-XIV	Microbiology & Plant Pathology	69.23	3	2.4	89.74	3	0.6	3
	Paper-XV	Plant Breeding, Biostatistics, Ethnobotany & Horticulture	61.63	3	2.4	94.87	3	0.6	3
	Paper-XVI	Molecular Biology & Biotechnology	69.23	3	2.4	97.41	3	0.6	3
								Total	22.4
								Average	2.8

Department of Zoology

The calculation for Program Outcome Attainment for the Year 2018-19 (B. Sc. III Zoology)

Attainment of course outcome									
Semester (Theory)	Course Code (Paper No.)	Course Title	% of students above 60% Universit ymarks	Level of Attainment	80% of Attainmen t Level in endterm exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainmen tLevel in the internal exam (II)	Attainmen tof Course (I+II)
Semester V (Theory)	Paper-IX	Functional anatomy of non-chordates	73.68	3	2.4	100	3	0.6	3
	Paper-X	Biostatistics, Bioinformatics, and Medical Zoology	89.47	3	2.4	100	3	0.6	3
	Paper-XI	Molecular Biology, Biotechnology and Biotechniques	68.42	3	2.4	100	3	0.6	3
	Paper-XII	Endocrinology, Env. Biology and Toxicology	100	3	2.4	100	3	0.6	3
Semester VI (Theory)	Paper-XIII	Comparative anatomy of Vertebrates	84.21	3	2.4	89.47	3	0.6	3
	Paper-XIV	Developmental Biology	63.15	3	2.4	89.47	3	0.6	3
	Paper-XV	Physiology	57.89	2	1.6	100	3	0.6	2.2
	Paper-XVI	Applied Zoology	100	3	2.4	94.73	3	0.6	3
								Total	23.2
								Average	2.9

Department of Mathematics

Calculation for Program Outcome Attainment for the Year 2018-19 (B. Sc. III Mathematics)

Attainment of course outcome									
Semester (Theory)	Course Code (Paper No.)	Course Title	% of students above 60% Universit ymarks	Level of Attainment	80% of Attainmen t Level in endterm exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainmen tLevel in internal exam (II)	Attainmen tof Course (I+II)
Semester V (Theory)	Paper-IX	Real Analysis	85	3	2.4	100	3	0.6	3
	Paper-X	Modern Algebra	90	3	2.4	100	3	0.6	3
	Paper-XI	Partial Differential Equations	100	3	2.4	100	3	0.6	3
	Paper-XII	Numerical Methods I	100	3	2.4	100	3	0.6	3
Semester VI (Theory)	Paper-XIII	Metric Spaces	86	3	2.4	100	3	0.6	3
	Paper-XIV	Linear Algebra	98	3	2.4	100	3	0.6	3
	Paper-XV	Complex Analysis	95	3	2.4	100	3	0.6	3
	Paper-XVI	Numerical Methods II	100	3	2.4	100	3	0.6	3
								Total	24.00
								Average	3

Calculation for Program Outcome Attainment for the Year 2018-19(B. Sc. III Computer Science)

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Department of Microbiology
Calculation for Program Outcome Attainment for the Year 2018-19 (B. Sc. III Microbiology)

Attainment of course outcome									
Semester (Theory)	Course Code (Paper No.)	Course Title	% of students above 60% Universit ymarks	Level of Attainment	80% of Attainmen t Level in endterm exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainmen tLevel in internal exam (II)	Attainmen tof Course (I+II)
Semester V (Theory)	Paper-IX	Virology	60	3	2.4	100	3	0.6	3
	Paper-X	Immunology	43	1	0.8	100	3	0.6	1.4
	Paper-XI	Food &Industrial Microbiology	36	1	0.8	100	3	0.6	1.4
	Paper-XII	Agriculture Microbiology	26	1	0.8	100	3	0.6	1.4
Semester VI (Theory)	Paper-XIII	Microbial Genetics	70	3	2.4	100	3	0.6	3
	Paper-XIV	Microbial biochemistry	53.33	2	1.6	100	3	0.6	2.2
	Paper-XV	Environmental Microbiology	80	3	2.4	100	3	0.6	3
	Paper-XVI	Medical Microbiology	60	3	2.4	100	3	0.6	3
								Total	18.4
								Average	2.3

Department of Marathi
Calculation for Program Outcome Attainment for the Year 2018-19 (B. A. III Marathi)

Attainment of course outcome									
Semester (Theory)	Course Code (PaperNo.)	Course Title	% of students above 60% University marks	Level of Attainment	80% of Attainment Level in end term exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainment Level in internal exam (II)	Attainment of Course (I+II)
Semester V (Theory)	Paper- VII	काव्यशास्त्र	40.00	1	0.8	100	3	0.6	1.4
	Paper VIII	भाषाविज्ञान आणि मराठी भाषा	50.00	2	1.6	100	3	0.6	2.2
	Paper-IX	मराठी वाङ्मयाचा इतिहास	70.00	3	2.4	100	3	0.6	3
	Paper- X	मराठी भाषा : उपयोजन आणि सर्जन	90	3	2.4	100	3	0.6	3
	Paper- XI	वाङ्मय प्रवाहाचे अध्ययन	90	3	2.4	100	3	0.6	3
Semester VI (Theory)	Paper-XII	काव्यशास्त्र	70	3	2.4	100	3	0.6	3
	Paper-XIII	भाषाविज्ञान आणि मराठी भाषा	60	1	2.4	100	3	0.6	3
	Paper-XIV	मराठी वाङ्मयाचा इतिहास	60	2	2.4	100	3	0.6	3
	Paper-XV	मराठी भाषा : उपयोजन आणि सर्जन	90	2	2.4	100	3	0.6	3
	Paper-XVI	वाङ्मय प्रवाहाचे अध्ययन	100	3	2.4	100	3	0.6	3
								Total	27.6
								Average	2.76

Department of Hindi
Calculation for Program Outcome Attainment for the Year 2018-19 (B. A. III HINDI)

Attainment of course outcome									
Semester (Theory)	Course Code (Paper No.)	Course Title	% of students above 60% University marks	Level of Attainment	80% of Attainment Level in end term exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainment Level in internal exam (II)	Attainment of Course (I+II)
Semester V (Theory)	Paper-VII	विधा विशेष का आद्ययन	70.00	3	2.4	100	3	0.6	3
	Paper VIII	साहित्यशास्त्र	30.00	1	0.8	100	3	0.6	1.4
	Paper-IX	हिंदी साहित्य का इतिहास	30.00	1	0.8	100	3	0.6	1.4
	Paper- X	प्रयोजनमूलक हिंदी	80	3	2.4	100	3	0.6	3
	Paper- XI	भाषा विद्यान और हिंदी भाषा	60	3	2.4	100	3	0.6	3
Semester VI (Theory)	Paper-XII	विधा विशेष का आद्ययन	60	3	2.4	100	3	0.6	3
	Paper-XIII	साहित्यशास्त्र	40	1	0.8	100	3	0.6	1.4
	Paper-XIV	हिंदी साहित्य का इतिहास	50	2	1.6	100	3	0.6	2.2
	Paper-XV	प्रयोजनमूलक हिंदी	50	2	1.6	100	3	0.6	2.2
	Paper-XVI	भाषा विद्यान और हिंदी भाषा	30	1	0.8	100	3	0.6	1.4
								Total	22
								Average	2.2

Department of English

Calculation for Program Outcome Attainment for the Year 2016-17 (B. A. III English)

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Department of Economics
Calculation for Program Outcome Attainment for the Year 2018-19 (B.A. III Economics)

Attainment of course outcome									
Semester (Theory)	Course Code (Paper No.)	Course Title	% of students above 60% University marks	Level of Attainment	80% of Attainment Level in endterm exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainment Level in internal exam (II)	Attainment of Course (I+II)
Semester V (Theory)	Paper-VII	Micro Economics	33.33	1	0.8	100	3	0.6	1.4
	Paper-VIII	Research Methodology in Economics (Part I)	55.55	2	1.6	100	3	0.6	2.2
	Paper-IX	History of Economic Thoughts (Part I)	38.88	1	0.8	100	3	0.6	1.4
	Paper-X	Economics of Development	33.33	1	0.8	100	3	0.6	1.4
	Paper-XI	International Economics (Part I)	52.63	2	1.6	100	3	0.6	2.2
Semester VI (Theory)	Paper-XII	Market and Pricing	41.17	1	0.8	100	3	0.6	1.4
	Paper-XIII	Research Methodology in Economics (Part II)	94.11	3	2.4	100	3	0.6	3
	Paper-XIV	History of Economic Thoughts (Part II)	47.5	2	1.6	100	3	0.6	2.2
	Paper XV	Economics of Planning	58.82	2	1.6	100	3	0.6	2.2
	Paper-XVI	International Economics (Part II)	77.77	3	2.4	100	3	0.6	3
								Total	20.4
								Average	2.04

Department of Geography

Calculation for Program Outcome Attainment for the Year 2018-19 (B. Sc. III Geography)

Attainment of course outcome									
Semester (Theory)	Course Code (Paper No.)	Course Title	% of students above 60% Universit ymarks	Level of Attainment	80% of Attainmen t Level in endterm exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainmen tLevel in internal exam (II)	Attainmen tof Course (I+II)
Semester V (Theory)	VII	Physical Geography of India	21.42	1	0.8	90.90	3	0.6	1.4
	VIII	Economic Geography of World	50.00	2	1.6	79.80	3	0.6	2.2
	IX	Research Methodology	64.28	3	2.4	100	3	0.6	3
Semester VI (Theory)	X	Economic Geography of India	71.42	3	2.4	85	3	0.6	3
	XI	Urban Geography	71.42	3	2.4	80.76	3	0.6	3
	XII	Political Geography	78.57	3	2.4	95.83	3	0.6	3
								Total	15.6
								Average	2.6

Department of Political Science
Calculation for Program Outcome Attainment for the Year 2018-19 (B. A. III)

Attainment of course outcome									
Semester (Theory)	Course Code (Paper No.)	Course Title	% of students above 60% Universit ymarks	Level of Attainment	80% of Attainmen t Level in endterm exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainmen tLevel in internal exam (II)	Attainmen tof Course (I+II)
Semester V (Theory)	Paper-VII	Political Theory	25	1	0.8	100	3	0.6	1.4
	Paper-VIII	Public Administration	12.50	1	0.8	100	3	0.6	1.4
	Paper-IX	International Politics	50	2	1.6	100	3	0.6	2.2
	Paper-X	Comparative Politics	75	3	2.4	100	3	0.6	3
	Paper-XI	Western Political Thought- I,	12.50	1	0.8	100	3	0.6	1.4
SemesterVI (Theory)	Paper-XII	Modern Political Concept	25	1	0.8	100	3	0.6	1.4
	Paper-XIII	Political Movement In Maharashtra	37.50	1	0.8	100	3	0.6	1.4
	Paper-XIV	Foreign Policy of India	25	1	0.8	100	3	0.6	1.4
	Paper-XV	Comparative Government	50	2	1.6	100	3	0.6	2.2
	Paper-XVI	Western Political Thought- II	18.75	1	0.8	100	3	0.6	1.4
								Total	17.2
								Average	1.72

Department of Sociology

Calculation for Program Outcome Attainment for the Year 2018-19 (B. A.-III Sociology)

Attainment of course outcome									
Semester (Theory)	Course Code (PaperNo.)	Course Title	% of students above 60% University marks	Level of Attainment	80% of Attainment Level in end term exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainment Level in internal exam (II)	Attainment of Course (I+II)
SemesterV (Theory)	Paper-VII	Western Sociological Thinkers	33.33	1	0.8	76.92	3	0.6	1.4
	Paper-VIII	Methods of Social Research [Part-I]	36.36	1	0.8	84.61	3	0.6	1.4
	Paper- IX	Political Sociology	16.66	1	0.8	84.61	3	0.6	1.4
	Paper-X	Human Rights	83.33	3	2.4	92.30	3	0.6	3
Semester VI (Theory)	Paper-XI	Sociology of Religion	75.00	3	1.6	92.30	3	0.6	3
	Paper-XII	Indian Sociological Thinkers	46.15	2	0.8	69.23	3	0.6	2.2
	Paper-XIII	Methods of Social Research [Part-II]	33.33	1	1.6	100	3	0.6	1.4
	Paper-XIV	Social anthropology	58.33	2	1.6	100	3	0.6	2.2
	Paper-XIV	Rural Sociology	58.33	2	1.6	84.61	3	0.6	2.2
	Paper-XV	Urban Sociology	25.00	1	0.8	100	3	0.6	1.4
								Total	19.6
								Average	1.96

Department of History
Calculation for Program Outcome Attainment for the Year 2018-19

Attainment of course outcome									
Semester (Theory)	Course Code (Paper No.)	Course Title	% of students above 60% University marks	Level of Attainment	80% of Attainment Level in end term exam (I)	% of students above 60% internal marks	Level of attainment	20% of Attainment Level in internal exam (II)	Attainment of Course (I+II)
Semester V (Theory)	Paper-VII	History of Ancient India	69.23	3	2.4	100	3	0.6	3
	Paper-VIII	Political History of medieval India	69.23	3	2.4	100	3	0.6	3
	Paper-IX	India Since Independence I	100%	3	2.4	100	3	0.6	3
	Paper-X	History of the Marathas	92.30	3	2.4	100	3	0.6	3
	Paper- XI	Introduction to Historyography	46.15	2	1.6	100	3	0.6	2.2
Semester VI (Theory)	Paper-XII	History of Ancient India	92.30	3	2.4	100	3	0.6	3
	Paper-XIII	Socio-Economic and Cultural History of medieval India	86.61	3	2.4	100	3	0.6	3
	Paper-XIV	India Since Independence II	86.61	3	2.4	100	3	0.6	3
	Paper-XV	Modern Maharashtra	31.46	1	0.8	100	3	0.6	1.9
	Paper-XVI	Application of History	53.84	2	1.6	100	3	0.6	2.2
								Total	26.8
								Average	2.68

MAPPING

Rubrics developed to validate POs for some Programmes

Correlation level 1, 2 and 3 are defined as follows:

1. Slight (Low) 2. Moderate (Medium) 3. Substantial (High)

Assessment Tools:

Program Outcomes	Courses considered	Method of Assessment	Source of data collection
PO 1-PO 10	For each PO, the contributing course is obtained from CO to PO mapping	1) Direct Assessment Internal evaluation <ul style="list-style-type: none">• Unit Tests• Assignments 2) External Evaluation University Exam	Result file and University Ledger

Mapping Factor (Correlation Level):

It indicates to what extent ascertain component (either assessment method to CO or CO to PO or CO to PSO)

- 3: Indicates Substantial (high) mapping (high contribution towards attainment)
- 2: Indicates Moderate (medium) mapping (medium contribution towards attainment)
- 1: Indicates Slight (low) mapping (some contribution towards attainment)

Calculation for Program Outcome Attainment for the Year 2018-19 (B. Sc. III Physics)CO's

are mapped with CIE (Continuous internal evaluation) marks as follows

1] Physics: Sem. V & VI

Paper IX: Mathematical & Statistical physics

Course outcomes	Test 1	HA 1	HA 2	Average
CO 1	3	3		3
CO 2	3	3		3
CO 3	3		3	3
CO 4	3		3	3
Total average	3	3	3	3

Paper X: Quantum Mechanics

Course outcomes	Test 1	HA 1	HA 2	Average
CO 1	3	3		3
CO 2	3	3		3
CO 3	3		3	3
CO 4	3		3	3
Total average	3	3	3	3

Paper XI: Classical Mechanics

Course outcomes	Test 1	HA 1	HA 2	Average
CO 1	3	3		3
CO 2	3	3		3
CO 3	3		3	3
CO 4	3		3	3
Total average	3	3	3	3

Paper XII: Atomic, Molecular Spectra & Astronomy and Astrophysics

Course outcomes	Test 1	HA 1	HA 2	Average
CO 1	3	3		3
CO 2	3	3		3
CO 3	3		3	3
CO 4	3		3	3
Total average	3	3	3	3

Paper XIII: Nuclear & Particle Physics

Course outcomes	Test 1	HA 1	HA 2	Average
CO 1	3	3		3
CO 2	3	3		3
CO 3	3		3	3
CO 4	3		3	3
Total average	3	3	3	3

Paper XIV: Energy Studies & material Science

Course outcomes	Test 1	HA 1	HA 2	Average
CO 1	3	3		3
CO 2	3	3		3
CO 3	3		3	3
CO 4	3		3	3
Total average	3	3	3	3

Paper XV: Electrodynamics & Electromagnetic Waves

Course outcomes	Test 1	HA 1	HA 2	Average
CO 1	3	3		3
CO 2	3	3		3
CO 3	3		3	3
CO 4	3		3	3
Total average	3	3	3	3

Paper XVI: Solid State Physics

Course outcomes	Test 1	HA 1	HA 2	Average
CO 1	3	3		3
CO 2	3	3		3
CO 3	3		3	3
CO 4	3		3	3
Total average	3	3	3	3

Step 2] COs are mapped with POs. The CO levels corresponding to each PO are averaged to obtain overall CO level for each PO as follows:

1]

Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1	3	3	3			3		3	3		3	3			3	
CO 2	3	3	3			3		3	3		3	3			3	
CO 3	3	3	3			3			3		3	3			3	
CO 4	3	3	3			3			3		3	3			3	
Paper IX	3	3	3	-	-	3	-	3	3	-	3	3	-	-	3	

2]

Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1	3	3	3			3			3			3				
CO 2	3	3	3			3			3			3				
CO 3	3	3	3			3			3			3				
CO 4	3	3	3			3			3			3				
Paper X	3	3	3	-	-	3	-	-	3	-		3	-	-		

3]

Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1	3	3	3	3		3			3			3				
CO 2	3	3	3	3		3			3			3				
CO 3	3	3	3	3		3			3			3				
CO 4	3	3	3	3		3			3			3				
Paper XI	3	3	3	3	-	3	-	-	3	-		3	-	-		

4]

Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1	3	3		3			3		3				3	3		3
CO 2	3	3		3		3	3		3				3	3		3
CO 3	3	3		3		3	3		3				3	3		3
CO 4	3	3		3			3		3				3	3		3
Paper XII	3	3	-	3	-	3	3	-	3	-			3	3		3

5]

Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1		3	3			3			3					3		
CO 2		3	3			3			3					3		
CO 3		3	3			3			3					3		
CO 4		3	3			3			3					3		
Paper XIII		3	3	-	-	3	-	-	3	-				3		

6]

Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1		3	3			3			3		3			3		
CO 2		3	3			3			3		3			3		
CO 3		3	3			3			3		3			3		
CO 4		3	3			3			3		3			3		
Paper XIV		3	3	-	-	3	-	-	3	-	3	-	-	3		

7]

Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1		3	3			3			3	3	3	3				
CO 2		3	3			3			3	3	3	3				
CO 3		3	3			3			3	3	3	3				
CO 4		3	3			3			3	3	3	3				
Paper XV		3	3	-	-	3	-	-	3	3	3	3	-			

8]

Course Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
CO 1		3	3			3			3	3	3				3	
CO 2		3	3		3	3			3	3	3				3	
CO 3		3	3			3			3	3	3				3	
CO 4		3	3		3	3			3	3	3				3	
Paper XVI		3	3	-	3	3	-	-	3	3	3		-		3	

Step 3] development of overall CO-PO mapping matrix for all courses of Physics

The overall CO levels obtained for all courses from above step can be expressed in matrix form.

Courses	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	PSO 6
Paper IX	3	3	3	-	-	3	-	3	3	-	3	3	-	-	3	
Paper X	3	3	3	-	-	3	-	-	3	-		3	-	-		
Paper XI	3	3	3	3	-	3	-	-	3	-		3	-	-		
Paper XII	3	3	-	3	-	3	3	-	3	-			3	3		3
Paper XIII	3	3	-	-	3	-	-	3	-				3			3
Paper XIV		3	3	-	-	3	-	-	3	-	3	-	-	3		
Paper XV		3	3	-	-	3	-	-	3	3	3	3	-			
Paper XVI		3	3	-	3	3	-	-	3	3	3		-		3	
Average	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3




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