Gokhale Education Society's
H.P.T. Arts and R.Y.K. Science College, Nashik-05
Prin. T. A. Kulkarni, Vidya Nagar, Nashik- 422005
"Higher Education for All"
prinhptryknsk@rediffmail.com 0253-2572153 www.hptrykcollege.com
Permanently Affiliated to Savitribai Phule Pune University (ID No.: PU/NS/AS/001(1924)
NAAC Re-Accredited: 'A' Grade, ISO 9001:2015 Certified College, Best College award by SPPU 2019-20

2.6. Student Performance and Learning Outcomes
2.6.2 Attainment of PO's and CO's are Evaluated

PO's and CO's Attainment-Direct Method

CO Analysis Paperwise

Gokhale Education Society's

H.P.T. Arts and R.Y.K. Science College, Nashik

Internal Quality Assurance Cell (IQAC)

Course Outcomes Mapping Analysis (2022-2023)

Sr.	Level	Programme	Subject	Code	Title	Internal	External	Overall
1	PG	MA-II	Economics	42301	Macro-Economic Analysis II	3	3	3.0
2	PG	MA-II	Economics	42302	Growth and Development II	3	3	3.0
3	PG	MA-II	Economics	42303	Research Project	3	3	3.0
4	PG	MA-II	Economics	42406	Economics of Enviornment	3	3	3.0
5	PG	MA-II	English	40601	Indian Writing in English	3	3	3.0
6	PG	MA-II	English	40602	Applied Linguistics	3	1	2.0
7	PG	MA-II	English	40603	Cultural Studies	3	2	2.5
8	PG	MA-II	English	40608	World Literature in English	3	2	2.5
9	PG	MA-II	Political Science	42401	Fundamentals of Political Theory	3	3	3.0
10	PG	MA-II	Political Science	42402	Political Process In India	3	3	3.0
11	PG	MA-II	Political Science	42403	Politics and Society	3	3	3.0
12	PG	MA-II	Political Science	42405	Politics of South Asia	3	2	2.5

Sr.	Level	Programme	Subject	Code	Title	Internal	External	Overall
13	PG	MSC-II	Microbiology	MB801	Pharmaceutical and medical Microbiology	3	3	3.0
14	PG	MSC-II	Microbiology	MB802	Molecular Biology II	3	3	3.0
15	PG	MSC-II	Microbiology	MBPE41	Practical based on Quality Assurance And Validation In Pharmaceutical Industry And Development Of Anti-infective	3	3	3.0
16	PG	MSC-II	Microbiology	MBTE41	Quality Assurance and Validation in Pharmaceutical Industry and Development Of Anti Invectives	3	3	3.0
17	PG	MSC-II	Microbiology	MBPE43	Practical based on Industrial Waste Water Treatment and Industrial Production of Vaccines	3	3	3.0
18	PG	MSC-II	Microbiology	MBTE43	Industrial Waste Water Treatment and Industrial Production of Vaccines	3	3	3.0
19	PG	MSC-II	Microbiology	MBCP4	Dissertation	3	3	3.0
20	PG	MSC-II	Zoology	50431C	Genetics-II	3	3	3.0
21	PG	MSC-II	Zoology	50432	MRP and Aqua	3	3	3.0
22	PG	MSC-II	Zoology	50433B	Pest Control	3	3	3.0
23	PG	MSC-II	Zoology	50435 B	Apiculture	3	3	3.0
24	PG	Blib-I	Library Science	BL– C11	Foundations of Library & Information Science	3	3	3.0
25	PG	Blib-I	Library Science	BL-C12	Library Management	3	3	3.0
26	PG	Blib-I	Library Science	BL-C13	Information Sources, Systems and Services	3	3	3.0
27	PG	Blib-I	Library Science	BL-C24	Basics of Information and Communication Technology (Practical)	3	3	3.0
28	PG	Blib-I	Library Science	BL-C14	Knowledge Organization : Classification Theory	3	3	3.0
29	PG	Blib-I	Library Science	BL-C21	Knowledge Organization : Classification Practical	3	3	3.0

Sr.	Level	Programme	Subject	Code	Title	Internal	External	Overall
30	PG	Blib-I	Library Science	BL-C22	C22 Knowledge Organization : Cataloguing Practical	3	3	3.0
31	PG	Blib-I	Library Science	BL-C23	C23 Basics of Information and Communication Technology (Theory)	3	3	3.0
32	PG	Blib-I	Library Science	BL-DSE	School and Media Librarianship	3	3	3.0
33	PG	Blib-I	Library Science	BL-GE	Generic Elective	NA	3	3.0
34	PG	Blib-I	Library Science	BL-SEC	Skill Enhancement Course	NA	3	3.0
35	UG	TYBA	History	36171	Applied History	3	1	1.6
36	UG	TYBA	History	36172	Maharashtra in the 20th Century	3	0	0.9
37	UG	TYBA	History	36177	Archaeology	3	3	3.0
38	UG	TYBA	Psychology	36221	Applied Psychology	3	3	3.0
39	UG	TYBA	Psychology	36223	Experimental Psychology (Theory)	3	3	3.0
40	UG	TYBA	Psychology	36224	Psychological Experiments	3	3	3.0
41	UG	TYBA	Sanskrit	36111	Laghusiddhant Kaumudi	3	3	3.0
42	UG	TYBA	Sanskrit	36112	Sadanandayati Kruta Vedantasara	3	3	3.0
43	UG	TYBA	Sanskrit	36113	Kavi Bhartruhari Virachita Nitishatakam	3	3	3.0
44	UG	TYBA	Sanskrit	36114	Sanskrit Writing Skills	3	3	3.0
45	UG	TYBSC	Biotech	BBt 601	Enzyme and Enzyme Technology	3	3	3.0
46	UG	TYBSC	Biotech	BBt 602	Agriculture Biotechnology	3	3	3.0
47	UG	TYBSC	Biotech	BBt 603	Applied Biotechnology II	3	3	3.0
48	UG	TYBSC	Biotech	BBt 604	Food and Pharmaceutical Biotechnology	3	3	3.0
49	UG	TYBSC	Biotech	BBt 605	Bioinformatics	3	3	3.0
50	UG	TYBSC	Biotech	BBt 606	Bio safety and [illegible] and IPR	3	3	3.0

Sr.	Level	Programme	Subject	Code	Title	Internal	External	Overall
51	UG	TYBSC	Chemistry	CH-601	Physical Chemistry-II	3	1	1.6
52	UG	TYBSC	Chemistry	CH-602	Physical Chemistry -III	1	0	0.3
53	UG	TYBSC	Chemistry	CH-603	Physical Chemistry Practical-II	3	3	3.0
54	UG	TYBSC	Chemistry	CH-604	Inorganic Chemistry-II	3	0	0.9
55	UG	TYBSC	Chemistry	CH-605	Inorganic Chemistry-III	1	0	0.3
56	UG	TYBSC	Chemistry	CH-606	Inorganic Chemistry Practical-II	3	3	3.0
57	UG	TYBSC	Chemistry	CH-607	Organic Chemistry-II	3	2	2.0
58	UG	TYBSC	Chemistry	CH-608	Organic Chemistry-III	0	0	0.0
59	UG	TYBSC	Chemistry	CH-609	Organic Chemistry Practical-II	3	3	3.0
60	UG	TYBSC	Chemistry	CH-610	(A) Chemistry of Soil and Agrochemicals	3	1	1.6
61	UG	TYBSC	Chemistry	CH-611	(A) Analytical Chemistry-II	3	0	0.9
62	UG	TYBSC	Statistics	36171	Distribution Theory -II	3	3	3.0
63	UG	TYBSC	Statistics	36172	Testing of Hypotheses	3	3	3.0
64	UG	TYBSC	Statistics	36173	Sampling Theory	3	3	3.0
65	UG	TYBSC	Statistics	36174	Introduction to Survival Analysis	3	3	3.0
66	UG	TYBSC	Statistics	36176	Operations Research-II	3	3	3.0
67	UG	TYBSC	Statistics	36178	Reliability Theory and Applications	3	3	3.0

i) Target level of CO attainment for Continuous Internal Assessment (CIA)

Level of Attainment		Threshold value for Internal Assessment = 50% (UG Science ≥ 8 marks) (PG Science ≥ 8 marks) (UG Arts ≥ 15 marks) (PG Arts ≥ 25 marks)
3	**High**	70% and above of the students
2	**Moderate**	60% - 69% of the students
1	**Low**	50% - 59% of the students
0	**Not Applicable**	Below 50% of the students

ii) Target level of CO attainment for End Semester Examination (ESE) :

Level of Attainment		Threshold value for External Assessment = 50% (UG Science ≥ 18 marks) (PG Science ≥ 18 marks) (UG Arts ≥ 35 marks) (PG Arts ≥ 25 marks)
3	**High**	70% and above of the students
2	**Moderate**	60% - 69% of the students
1	**Low**	50% - 59% of the students
0	**Not Applicable**	Below 50% of the students

Dr. P.U. Ratnaparkhi

H.P.T. Arts & R.Y.K. Science College Nashik-05

Dr. V.N. Suryawanshi
PRINCIPAL
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Nashik - 5.

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H.P.T. Arts and R.Y.K. Science College, Nashik

Internal Quality Assurance Cell (IQAC)

Course Outcomes Mapping Analysis (2022-2023)

TYBA History SEM-VI 2022-2023 Sub: SEC-2D- Archaeology (36177)

Sr	Seat No	Name of the Student	Internal Marks (25)	External Marks (25)
1	25829	CHAVAN PRAJAKTA BHARAT	21	20
2	25830	CHAVAN SAKSHI RAJENDRA	20	17
3	25831	GANGURDE KOMAL SUNIL	20	19
4	25832	GANGURDE RAJESH BHIMRAO	19	19
5	25833	KASHID SAGAR DAULAT	18	17
6	25834	KHAIRNAR SIDDHARTH RAJENDRA	AB	AB
7	25835	KHANDARE SHUBHAM ASHRUJI	20	18
8	25836	MALEKAR BHARAT MANOHAR	18	17
9	25837	MANOHAR SHARAD BALU	19	17
10	25838	PAGARE ABHISHEK GANESH	16	15
11	25839	PAWAR ANKUSH KASHINATH	23	17
12	25840	SALVE PRAFUL SUNIL	21	17
13	25841	SALVE SIDDHESH SAMADHAN	20	14
14	25842	TRIBHUVAN SANKET RAJENDRA	19	16
15	25843	WAGHMARE ROHIT BALU	AB	AB
16	25941	ADHANGLE PRATIKSHA ASHOK	21	19
17	25942	BARVE ANIRUDDHA ANAND	23	17
18	25943	BHANDARKAR ADITYA SUPADU	23	20
19	25944	DEOKUTE MADHURA YOGESH	24	20
20	25945	JANGID RIYA BIHARI	23	20
21	25946	KHAIRE SHWETA DATTATRAY	18	18
22	25947	MANSURI ARSHIL SHABIR	19	17
23	25948	PATIL ROHIT BHAUSAHEB	20	17
24	25949	SAPARIYA VRAJESH JITENDRA	22	15
25	25950	VAISHNAVI SANTOSH RAJPUT	21	17
26	26029	DAHAWAD TEJAS GORAKH	18	13
27	26031	DHOLE KOMAL GAUTAM	22	14
28	26033	KAWAR ANIL AMBADAS	21	13
29	26034	LAVAND SUNNY RAMESH	18	15
30	26040	SHELAKE PAVAN BALU	20	15

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Internal Quality Assurance Cell (IQAC)

Course Outcomes Mapping Analysis (2022-2023)

TYBA History SEM-VI 2022-2023 Sub: SEC-2D- Archaeology (36177)

Attainment Analysis		
	Internal	External
Total No. of students registerd for the Examination	30	30
Total No. of Students Absent for the Examination	2	2
Total No. of Students Appeared for the Examintaion	28	28
	≥ 13 Marks	≥13 Marks
Number of Students with score	28	28
Percentage of Sytudents Scoring	100%	100.00%
Direct attainment level of the Course	**3**	**3**
Under all CO Attainment = 50% of CIA + 50% of SEE = (0.50 x 3) +(0.50 x 3) =1.5+1.5 = 3.		

For.

HEAD
DEPARTMENT OF HISTORY
H.P.T. Art's & R.Y.K. Sci.College,
Nashik-422 005

Gokhale Education Society's

H.P.T. Arts and R.Y.K. Science College, Nashik

Internal Quality Assurance Cell (IQAC)

Course Outcomes Mapping Analysis (2022-2023)

MA-II Economics SEM-IV 2022-2023 Sub: Macro Economic Analysis II (42301)

Sr	Seat No	Name of the Student	Gender	Internal Marks	Extern Mark
1	23479	KULKARNI JANHAVI SHAILENDRA	FEMALE	20	37
2	23480	NAGARALE UDAY PRABHAKAR	MALE	A	A
3	23481	WATHORE SANDHYA RAMDAS	FEMALE	A	31
4	23482	BHOYE ROHIDAS VINAYAK	MALE	34	39
5	23483	DAS SUMIT SWAPAN	MALE	33	36
6	23484	DEORE RENUKA VASANT	FEMALE	32	29
7	23485	GOHIL JAYA BALU	FEMALE	29	29
8	23486	KAMBLE RAVINDRA SUDAM	MALE	31	38
9	23487	LAHANGE NITIN SOMNATH	MALE	30	A
10	23488	MAHALE DEVIDAS BHAU	MALE	32	40
11	23489	MENE SUJATA SANJAY	FEMALE	27	34
12	23490	NAND DEEPAK BANDU	MALE	27	37
13	23491	PADVI BHARATSING KELLA	MALE	29	38
14	23492	PANDORE MITALI HARICHANDRA	FEMALE	27	23
15	23493	PHADOL GOKUL ANIL	MALE	31	39
16	23494	SANKAR GIRIDHAR JAGAN	MALE	39	40
17	23495	SHINDE PIYUSH SHASHIKANT	MALE	32	37
18	23496	SIDDHI SANJAY WAGH	FEMALE	32	39
19	23497	TANVI SANJAY DESHMUKH	FEMALE	37	38
20	23498	UBALE SHRADDHA BALU	FEMALE	A	34

Attainment Analysis		
Details	**Internal**	**Extern**
Total No. of students registerd for the Examination	20	20
Total No. of Students Absent for the Examination	3	2
Total No. of Students Appeared for the Examintaion	17	18
Number of Students with score	≥ 25 Marks	≥25 Ma
	16	
Percentage of Students Scoring	94.12%	94.44
Direct attainment level of the Course	3	3

Under all CO Attainment = 50% of CIA + 50% of SEE = (0.50 x 3) +(0.50 x 3) = 1.5+1.5 = 3.0

H.P.T. ARTS & R.Y.K. SCIENCE COLLEGE 90

Dr. Vijaykumar Wawle
Department of Economics
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Gokhale Education Society's

H.P.T. Arts and R.Y.K. Science College, Nashik

Internal Quality Assurance Cell (IQAC)

Course Outcomes Mapping Analysis (2022-2023)

MA-II Political Science SEM-IV 2022-2023 Sub: Fundamentals of Political Theory (42401)

Sr	Seat No	Name of the Student	Gender	Internal Marks	External Marks
1	23555	Bhoye Pralhad Gopal	Male	38	30
2	23556	Borade Pradeep Sham	Male	40	37
3	23557	Chaure Manisha Pandurang	Female	39	37
4	23558	Gangode Pravin Dewaji	Male	39	27
5	23559	Gavit Ankush Anil	Male	34	28
6	23560	Gavit Sujit Chandu	Male	38	37
7	23561	Ghanghav Ananda Bhanudas	Male	40	33
8	23562	Khotare Mahendra Suresh	Male	39	39
9	23563	Paikrao Akash Anil	Male	37	37
10	23564	Sonawane Ganesh Ravindra	Male	38	26
11	23565	Tongare Vishnu Vilas	Male	35	27
12	23566	Vankar Lahanu Mahadu	Male	33	27
13	23567	Ahire Amol Gavarlal	Male	39	33
14	23568	Ausarmal Akash Nana	Male	41	37
15	23569	Bachav Shubham Shantaram	Male	41	40
16	23570	Bhoite Utkarsha Dattatray	Female	36	33
17	23571	Ingale Akash Ravindra	Male	36	40
18	23572	Kadam Abhishek Kacharu	Male	38	36
19	23573	Kandalkar Amruta Rajendra	Female	43	45
20	23574	Karpe Priyanka Subhash	Female	41	36
21	23575	Khoskar Bhagirath Chandrkant	Male	31	33
22	23576	Kokane Swati Vilas	Female	43	38
23	23577	Mahale Pralhad Devram	Male	42	34
24	23578	Marathe Chaitali Pravin	Female	38	42
25	23579	Medhane Amol Ravsaheb	Male	37	40
26	23580	Kanade Nilam Sharad	Female	42	45
27	23581	Pagar Dhanashri Dnyaneshwar	Female	38	40

Gokhale Education Society's

H.P.T. Arts and R.Y.K. Science College, Nashik

Internal Quality Assurance Cell (IQAC)

Course Outcomes Mapping Analysis (2022-2023)

MA-II Political Science SEM-IV 2022-2023 Sub: Fundamentals of Political Theory (42401)

Sr	Seat No	Name of the Student	Gender	Internal Marks	External Marks
28	23582	Pagare Rahul Sanjay	Male	36	34
29	23583	Pawara Mina Vishwanath	Female	40	39
30	23584	Rathod Naresh Namdev	Male	39	35
31	23585	Sasane Omkar Jagdish	Male	40	31
32	23586	Shinde Ganesh Bandu	Male	39	36
33	23587	Shinde Hrutuja Kamlakar	Female	38	38
34	23588	Shinde Nikita Anil	Female	42	42
35	23589	Vanarase Bhushan Arun	Male	43	41
36	23590	Zole Rahul Uttam	Male	42	34
37	23591	Ahirrao Parag Anil	Male	25	30
38	23592	Deore Durga Pramod	Female	29	33

Attainment Analysis

	Internal	External
Total No. of students registerd for the Examination	38	38
Total No. of Students Absent for the Examination	0	0
Total No. of Students Appeared for the Examintaion	38	38
Number of Students with score	≥ 25 Marks	≥25 Marks
	38	38
Percentage of Sytudents Scoring	100.00%	100.00%
Direct attainment level of the Course	3	3

Under all CO Attainment = 50% of CIA + 50% of SEE = (0.50 x 3) +(0.50 x 3) = 1.5+1.5 = 3.0

VHEAD
DEPARTMENT OF POLITICAL SCIENCE
H.P.T. Arts & R.Y.K Sc. College, Nashik-5

Gokhale Education Society's

H.P.T. Arts and R.Y.K. Science College, Nashik

Internal Quality Assurance Cell (IQAC)

Course Outcomes Mapping Analysis (2022-2023)

TYBA Statistics SEM-VI 2022-2023 Sub: ST-361:Distribution Theory -II (36171)

Sr. No.	Seat No.	Name of students	Internal Out of 15	External out of 35
1	13259	Ahire Vaibhav Gulab	6	24
2	13227	Angel Antony	10	31
3	13228	Attar Farida Sikandar	15	33
4	13229	Bhanose Nikhil Rajesh	15	35
5	13230	Bhoi Nilesh Sawan	14	27
6	13231	Dahale Chaitanya Sunil	14	30
7	13232	Deochake Nupur Prasad	12	27
8	13233	Deore Leena Hemant	12	25
9	13234	Dokhale Avantika G	10	33
10	13251	Gaidhani Sankalp Kailas	14	28
11	13235	Gurule Mayur Sharad	15	31
12	13236	Jangid Khushi Santosh	13	35
13	13237	Joshi Devashri Pravin	14	35
14	13240	Kadu Madhura Sanjay	15	34
15	13238	Kelkar Saisha Prasad	10	32
16	13258	Kolhe Tejas Ananda	7	22
17	13242	Kotharkar Mahesh V	10	33
18	13239	Kulkarni Shravani Anil	12	34
19	13244	Kurhade Neha Ramnath	15	34
20	13241	Magar Hrushikesh B	6	29
21	13243	Mankar Hrishikesh A	12	30
22	13245	Pandit Bablu R	9	26
23	13246	Pandit Sumeet Hareram	15	28
24	13247	Patil Shrushti R	10	34
25	13248	Patro Saikrishna Babula	8	32
26	13254	Pawar Shubhada D	14	35
27	13249	Poi Pradeep K	12	35
28	13250	Rathod Chetan Saltan	14	35
29	13252	Sharma Vivek Mahesh	12	35
30	13253	Shirore Sakshi Sudhakar	12	30

Gokhale Education Society's

H.P.T. Arts and R.Y.K. Science College, Nashik

Internal Quality Assurance Cell (IQAC)

Course Outcomes Mapping Analysis (2022-2023)

TYBA Statistics SEM-VI 2022-2023 Sub: ST-361:Distribution Theory -II (36171)

Sr. No.	Seat No.	Name of students	Internal Out of 15	External out of 35
31	13255	Shukla Shruti S	10	34
32	13256	Singh Namrata Anoj	10	28
33	13257	Singh Pratik Ramprakat	15	29
34	13141	Sonawane Aayush D	7	23
35	13142	Sonawane Prasad R	6	19

Attainment Analysis

	Internal	External
Total No. of students registerd for the Examination	35	35
Total No. of Students Absent for the Examination	0	0
Total No. of Students Appeared for the Examintaion	35	35
Number of Students with score	≥ 8 Marks	≥18 Marks
	30	35
Percentage of Sytudents Scoring	86%	100.00%
Direct attainment level of the Course	**3**	**3**

Under all CO Attainment = 30% of CIA + 70% of SEE = (0.30 x 3) +(0.70 x 3) = 0.9+2.1 = 3.0

for Samas

Head
Department of Statistics
HPT Arts & RYK Science College,
NASHIK-422 005.

HPT Arts & RYK Science College ★ Nashik-5 ★ Department of Statistics

Gokhale Education Society's

H.P.T. Arts and R.Y.K. Science College, Nashik

Internal Quality Assurance Cell (IQAC)

Course Outcomes Mapping Analysis (2022-2023)

TYBA Sanskrit SEM-VI 2022-2023 Sub:Laghusiddhant Kaumudi (36111)

Sr. No.	NAME OF THE STUDENT	Internal	External
1	Kulkarni Harish Chandrashekhar Swati	14	29
2	Bang Anuja Sachin Anita	22	49
3	Deshpande Rgved Ravindra Rutuja	29	59
4	Godshe Parth Prabhakar Pradnya	23	53
5	Gujarathi Aastha Manish Archana	26	56
6	Kale Mansi Bhanudas Swati	26	44
7	Mule Sayali Chandrakant Ankita	23	48
8	Aher Pranav Ramnath Padma	22	39
9	Joshi Priya Prashant Vidya	27	46
10	Shiral Tejas Gulab Sushma	24	42

Attainment Analysis		
	Internal	External
Total No. of students registerd for the Examination	10	10
Total No. of Students Absent for the Examination	0	0
Total No. of Students Appeared for the Examintaion	10	10
Number of Students with score	≥ 15 Marks	≥35 Marks
	9	9
Percentage of Sutudents Scoring	90%	90.00%
Direct attainment level of the Course	**3**	**3**
Under all CO Attainment = 30% of CIA + 70% of SEE = (0.30 x 3) +(0.70 x 3) = 0.9+2.1 = 3.0		

H.P.T. ARTS & R.Y.K. SCIENCE COLLEGE NASHIK 05

For

HEAD
DEPARTMENT OF SANSKRIT
H.P.T Arts & R.Y.K. Sc. College, Nashik-5

Gokhale Education Society's
HPT ARTS & RYK SCIENCE COLLEGE
Prin. T. A. Kulkarni Vidyanagar, Nashik - 422 005.
ID No. : PU/NS/AS/001 (1924)
NAAC Re-Accredited 'A' Grade
ISO 9001 :2015 Certified College
SPPU Best College 2019-2020
Jr. College Code No. J13.17.003
Phone : Sr. College : (0253) 2572153
Jr. College : (0253) 2579480
Fax : (0253) 2573097
Email : prinhptryknsk@rediffmail.com
Website : www.hptrykcollege.com

Pass Percentage of Students (2018-19 to 2022-23)

Year	Program Code	Program Name	Number of students appeared in the final year examination	Number of students passed in final year examination	%
2022-2023	8	B.A.	261	214	81.99
	124	B.Lib. & I.Sc.	20	16	80.00
	93	B.Sc.	218	155	71.10
	93	BSc Biotechnology	40	38	95.00
	93	BSc Comp.Sci.	74	47	63.51
	7	M.A.	194	163	84.02
	125	M.Lib.I.Sc.	9	7	77.78
	7	M.J.M.C. (MAMCJ)	16	15	93.75
	94	M.Sc.	137	122	89.05
	94	MSc.C.S.	31	29	93.55
2021-2022	8	B.A.	279	230	82.44
	124	B.Lib & I.Sc.	27	27	100.00
	93	B.Sc.	289	243	84.08
	93	BSc Biotechnology	41	40	97.56
	93	BSc Comp.Sci.	97	83	85.57
	7	M.A.	282	232	82.27
	125	M.Lib & I.Sc.	9	5	55.56
	7	M.J.M.C. (MAMCJ)	18	10	55.56
	94	M.Sc.	160	134	83.75
	94	MSc.C.S.	30	30	100.00
2020-2021	8	B.A.	250	232	92.80
	124	B.Lib & I.Sc.	15	14	93.33
	93	B.Sc.	272	269	98.90
	93	BSc Biotechnology	43	39	90.70
	93	BSc Comp.Sci.	76	75	98.68
	7	M.A.	171	154	90.06
	125	M.Lib.I.Sc.	10	10	100.00
	7	M.J.M.C. (MAMCJ)	21	20	95.24
	94	M.Sc.	146	143	97.95
	94	MSc.C.S.	29	29	100.00

2019-2020	8	B.A.	224	204	91.07
	124	B.Lib & I.Sc.	28	27	96.43
	93	B.Sc.	247	244	98.79
	93	BSc Biotechnology	43	39	90.70
	93	BSc Comp.Sci.	56	51	91.07
	7	M.A.	196	181	92.35
	125	M.Lib.I.Sc.	10	10	100.00
	7	M.J.M.C. (MAMCJ)	19	17	89.47
	94	M.Sc.	143	138	96.50
	94	MSc.C.S.	30	30	100.00
2018-2019	8	B.A.	197	166	84.26
	124	B.Lib & I.Sc.	20	19	95.00
	93	B.Sc.	236	192	81.36
	93	BSc Biotechnology	36	31	86.11
	93	BSc Comp.Sci.	43	30	69.77
	7	M.A.	175	162	92.57
	125	M.Lib.I.Sc.	10	10	100.00
	7	M.J.M.C. (MAMCJ)	21	15	71.43
	94	M.Sc.	145	120	82.76
	94	MSc.C.S.	27	23	85.19
Total			**5171**	**4534**	**87.68**

HPT ARTS & R.Y.K. SCIENCE COLLEGE NASHIK 422 005

Dr. V. N. Suryawanshi

Principal
HPT Arts / RYK Sc College
Nashik-5

CO Analysis- Question wise

Savitribai Phule Pune University

(Formerly University of Pune)

Three Year B.Sc. Degree Program in Biotechnology

(Faculty of Science & Technology)

F.Y. B. Sc. (Biotechnology)

Choice Based Credit System Syllabus

To be implemented from Academic Year 2019-2020

sets will help a graduate student to avail the opportunities in the applied fields (research, industry or institutions) without any additional training. Thus, the university/college itself will be developing the trained and skilled man-power. Biotechnology being an interdisciplinary subject, this restructured syllabus will combine the principles of physical, chemical and biological sciences along with developing advanced technology.

Biotechnology curricula are operated at two levels viz. undergraduate and postgraduate. The undergraduate curricula are prepared to impart primarily basic knowledge of the respective subject from all possible angles while postgraduate syllabus emphasizes on more applied courses. In addition, students are to be trained to apply this knowledge particularly in day-to-day applications of biotechnology and to get a glimpse of research.

The basic aim of the revised course curriculum is to integrate various disciplines of life sciences which will cater the needs of human resources in academia and industry. The Overall objective of the Program is to promote education and research in biotechnology and provide academic and professional excellence for immediate productivity in academics, government organization, biomedical sectors, health and nutrition settings for ultimate benefit of society and sustainable development.

The objectives of the course curriculum are:

- To introduce the concepts in various allied subjects
- To enrich students' knowledge in basic and applied aspects of life sciences.
- To help the students to build interdisciplinary approach in teaching/ learning & in research.
- To inculcate the sense of scientific responsibilities and social awareness
- To help students build-up a progressive and successful career in academia and industry.

The present course curriculum will generate skilled human resource required in academia and Industry. In general, as a result of this program, the student will be able to achieve basic and advance knowledge based proficiency in applied subjects of life sciences, create and develop students with interdisciplinary mind set for learning science, improve problem solving aptitude using scientific methods in biotechnology and allied subjects, will adopt scientific approach for implications of biotechnology in society, environment and education, will demonstrate knowledge and learn various biological processes at cellular and molecular level and get expertise in the different techniques used in the fields of Biotechnology.

Course Code: BBt-206 Microbiology- II

(2 Credit Course)
Total Lectures=30

Unit	Topic	No. of lectures
I	**Cultivation, growth and isolation of microorganisms:** • Basic Nutritional (Macro and micro), and environmental requirements (Hydrogen ion concentration, Temperature and Oxygen and other), Nutritional classification of bacteria • Design of media (Bacterial and Fungal): Types of media and Composition: Liquid, semi-solid and solid media, Selective media, Enrichment media, Enriched media, differential media, selective and differential media, Minimal media and there uses. • Reproduction in microorganisms: Binary Fission and other asexual methods of reproduction, logarithmic representation of bacterial populations, phases of growth, calculation of generation time and specific growth rate. • Cultivation –Concept of Pure culture, co-culture and Mixed culture, Colony characteristics. • Isolation of microorganisms and pure culture techniques: Streak, Spread, Serial Dilution, Pour plate, Enrichment, Single cell isolation Colony • Preservation and Maintenance methods	15
II.	**Control of microbial growth:** • Definition: Sterilization and Disinfection. • Physical Agents – Heat (Dry and Moist heat), pasteurization, Radiation, Filtration • Principle and working of Autoclave and Hot air oven. • Sterilization Efficiency • **Chemical Agents and their Mode of Action** - Aldehydes, Halogens, Quaternary Ammonium Compounds, Phenol and Phenolic Compounds, Heavy Metals, Alcohol, Dyes, and Detergents • **Disinfectant**-Characteristics of an Ideal disinfectant, Examples of Disinfectants and Evaluation of Disinfectant • **Antibiotics and other chemotherapeutic agents-** Examples and mode of action (one example each), Concept of MIC and MBC	12
III.	**Microbial Interactions**(Any 2 examples each) • Microbe-Plant, • Microbe-Animal • Microbe-Microbe interaction • Handling of microorganisms and Biosafety measures.	3

Gokhale Education Society's
HPT Arts and R.Y.K Science College Nasik
F.Y B.Sc. Biotechnology internal Theory Exam March/ April 2023
Department of Biotechnology
Title of the Paper: BBt 206 Microbiology -II

Date: 31/03/2023

Time 1:00 hr
Marks: 15 M

Q.1. Write Short Notes (Any 2) Co 1 [5]

1.Selective Media
2.Nutritional classification of bacteria
3.Pure culture

Q.2 Answer the following questions (Any 2) Co II [10]

1.Define the term Isolation Explain the Techniques used for the isolation of Microorganisms
2.What is Nutrition. Explain Micronutrients & Macronutrients required for the growth of the Microorganism
3. Define Media. What are the different types of Media?

Marklist

Gokhale Education Society's
HPT Arts and R.Y.K Science College Nasik
F.Y B.Sc. Biotechnology internal Theory Exam March/ April 2023
Department of Biotechnology
Title of the Paper: BBt 206 Microbiology –II
Mark List- March/ April 2023

Sr	Roll No	Seat No	Name of student	Gender	Q.1	Q.2	Total
1	1	989	Arya Raju	Female	04	07	11
2	2	990	Avani ajyan	Female	05	09	14
3	3	991	Samrudhi Avhad	Female	04	07	11
4	4	992	Anagha Bairagi	Female	05	09	14
5	5	993	Vinita Baviskar	Female	05	09	14
6	6	994	Sandesh bendkoli	Male	04	04	08
7	7	995	Ruchika Bhalerao	Female	03	05	08
8	8	996	Sakshi bhalerao	Female	01	06	07
9	9	997	Anushka chavan	Female	05	08	13
10	10	998	Prajyoti chore	Female	04	07	11
11	11	999	Dhanashri pawar	Female	05	03	08
12	12	1000	Faizaan shaikh	Male	02	07	09
13	13	1001	Guari Deshmukh	Female	03	08	11
14	14	1002	Shruti Jha	Female	05	10	15
15	15	1003	Ishwari joshi	Female	05	07	12
16	16	1004	Riya Karandikar	Female	01	05	06
17	17	1005	Shubhada Khare	Female	05	10	15
18	18	1006	Arya Kulkarni	Male	03	03	06
19	19	1008	Komal makasare	Female	04	08	12
20	20	1009	Nupur Nisal	Female	04	10	14
21	21	1010	Jayesh pagar	Male	03	08	11
22	22	1012	Pranali girase	Female	04	09	13
23	23	1013	Pranali mistray	Female	02	07	09
24	24	1015	Bhargavi pujari	Female	04	07	11
25	25	1016	Rukhasar rangraj	Female	02	07	09
26	26	1018	Aaditya sandhan	Male	06	03	03
27	27	1019	Nausheen sheikh	Female	05	09	14
28	28	1020	Rashmim Sheikh	Female	02	07	09
29	29	1021	Vaishnavi shelke	Female	04	06	10
30	30	1022	Simran singh	Female	04	07	11
31	31	1023	Sneha sha	Female	02	07	09
32	32	1024	Tanishka bhangare	Female	02	06	08
33	33	1025	Vinaya kale	Female	04	08	12
34	34	1026	Vrushali mahale	Female	02	05	07

Name of Examiner

H.P.T. ARTS & R.Y.K. SCIENCE COLLEGE Nashik 05

Head of Biotechnology

HEAD
Dept. of Biotechnology
HPT / RYK SCI. College,Nashik-422 005

CO Mapping Analysis

Sr. No	Seat No.	Roll No	Student's Name			Course Objectives/Outcomes		
						CO1	CO2	
						Q.1 (5M)	Q.2 (10 M)	Total (15)
1	989	1	Raju	Arya		4	7	11
2	990	2	ajyan	Avani		5	9	14
3	991	3	Avhad	Samrudhi	santosh	4	7	11
4	992	4	Bairagi	Anagha	rajendra	5	9	14
5	993	5	Baviskar	Vinita	Gautam	5	9	14
6	994	6	Bendkoli	Sandesh	Hiraman	4	4	8
7	995	7	Bhalerao	Ruchika	subhash	3	5	8
8	996	8	bhalerao	Sakshi	kailas	1	6	7
9	997	9	chavan	Anushka	Sachin	5	8	13
10	998	10	chore	Prajyoti	pradeepk	4	7	11
11	999	11	Pawar	Dhanashri	s.	5	3	8
12	1000	12		Faizaan	shaikh	2	7	9
13	1001	13		Gauari	Deshmuk	3	8	11
14	1002	14	Jha	Shruti	Rajesh	5	10	15
15	1003	15	joshi	Ishwari	kedar	5	7	12
16	1004	16	Karandika	Riya	sandip	1	5	6
17	1005	17	Khare	Shubhada	ganesh	5	10	15
18	1006	18	Kulkarni	Arya	utkarsh	3	3	6
19	1008	19	makasare	Komal	kishor	4	8	12
20	1009	20	Nisal	Nupur	Ganesh	4	10	14
21	1010	21	pagar	Jayesh	chnadrasl	3	8	11
22	1012	22	girase	Pranali	Anil	4	9	13
23	1013	23	mistray	Pranali	rajendra	2	7	9
24	1015	24	pujari	Bhargavi	madhav	4	7	11
25	1016	25	rangraj	Rukhasar	rauf	2	7	9
26	1018	26	sandhan	Aaditya	vinayak	0	3	3
27	1019	27	sheikh	Nausheen	Anish	5	9	14
28	1020	28	sheikh	Rashmim	rashid	2	7	9
29	1021	29	shelke	Vaishnavi	rajendra	4	6	10
30	1022	30	singh	Simran	jitendra	4	7	11
31	1023	31	shah	Sneha	Sachin	2	7	9
32	1024	32	bhangare	Tanishka	Mohan	2	6	8
33	1025	33	Kale	Vinaya	Avinash	4	8	12
34	1026	34	mahale	Vrushali	nivrutti	2	5	7
					Total	117	238	355
					Avg	3.44	7	10.44
					Criteria (60%)	24	27	25
					Scale 3	2.11	2.38	2.2
					Mapping	Fully Aligned	Fully Aligned	Fully Aligned

Action Taken/Suggestions

- Students can be encouraged to apply the knowledge in all the fields
- Teacher can continue with one to one approach with the students
- Teacher can continue to use the same methodology
- Teacher can continue the Mentor mentee program to help students in overall development

Subject Teacher

H.P.T. ARTS & R.Y.K. SCIENCE COLLEGE NASHIK 422 005
College Stamp

Head of Department
HEAD
Dept. of Biotechnology
HPT / RYK SCI. College Nashik-422 005

CO Mapping

Department of Computer Science
S.Y.B.Sc.(Computer Science), Electronics Sem-IV
Paper II-Wireless Communication and IOT (ELC-242)
Syllabus (2019 Pattern)

Objectives:

1. To learn and understand applications of wireless communication system
2. To learn and understand cellular system
3. To learn and understand architecture of short range Wireless Technologies
4. To learn and understand basics of Internet of Things
5. To study applications of IoT

Course Outcomes :

1. Know working of wireless technologies such as Mobile communication,GSM,GPRS
2. Become familiar with3G and 4G Cellular Network Technologies for Data Connections.
3. Understand working principles of short range communication application
4. Get introduce to upcoming technology of Internet of Things
5. Explore themselves and develop new IoT based applications

COURSE CONTENTS

Unit1 : Wireless Communication: Cellular Telephony **(12)**

Overview of wireless communication.

Introduction of cellular telephony system:

Frequency reuse ,handoff strategies,Co-channel and adjacent channel interference, block diagram of mobile handset

OverviewofCellularTelephonygenerations:1G to 5G,3G(W-CDMA,UMTS), 4G(LTE)

GSM: Architecture, frame structure ,mobility management.

GPRS: Architecture, application

Unit 2 : Short Range Wireless Technologies and LocationTracking **(12)**

Short rangeTechnologies:

Bluetooth: Bluetooth architecture, Bluetooth protocol stack, Bluetooth frame structure
Zigbee:Architecture,topologies,applications,Zwave:Protocolarchitecture,applications
RFID:working of RFID system, types of RFID tags, RFID frequencies, applications

Location Tracking: GPS system: components of GPS system (space segment, control segment, user segment), GPS receiver, Applications

Unit 3: IoT Architecture **(08)**

Introduction to IOT : Evolution of IOT, M2M and/or IOT, Seven layer architecture of IoT, Role of cloud in IoT, cloud topologies, Cloud access, Protocols in IoT, Cross connectivity

device IoT system components

- Device to Gateway: short range Wireless: cellphone as gateway, dedicated wireless Access points
- Gateway to cloud Long range connectivity: (wired, cellular, Satellite WAN)
- Direct Device to Cloud connectivity

Networking Technologies: Low power local area networking (LPLAN) Low power wide area networking (LPWAN) technologies, comparison of LoRa, sigfox, NB IoT, Cat- M

Unit 4: IoT Applications **(04)**

Application Domains

Challenges in IoT: Power consumption Physical security ,durability ,Secure Connectivity ,Secure Data Storage, Data volume, Scalability

Case studies:

CaseStudy1 Smart Irrigation system for Agricultural Field

Case Study 2 Home Automation

Case Study3 Smart Cities

Recommended books:

1. Wireless Communications Principles and Practice,Rappaport,Pearsonpublication

2. Mobile Communications,JochenSchiller,Pearson publication

3. Internet of Things Principles and Paradigms,RajkumarBuyya and Dastjerdi,MKpublishers

4. Internet of Things, Mayur Ramgir,Pearson publication

QUESTION PAPER

Gokhale Education Society's
HPT Arts and RYK Science College Nasik
Department of Computer Science
Subject: ELC-242(Wireless communication and IOT)
Sem-IV Internal Exam

Date: 12/03/2024
Marks: 15
Class: S.Y.B.Sc (CS)

Q1. Select appropriate option from following: **(04)**

1. GPRS stands for _____.
2. MSC stands for_____.
3. Unlicensed spectrum is of _____ Hz.
4. SIM stands for_____.

Q2. Answer in one sentence (1 mark each) **(04)**

1. Define interference .state different types of interference.
2. Give full form of RFID, PIN.
3. Distinguish between active tags and passive tags.
4. List different topologies used in Bluetooth technology.

Q3. Answer in short (2 marks each) (attempt any two) **(04)**

1. Draw GSM architecture.
2. Draws scatter net and Piconet Bluetooth architecture.
3. Draw protocol stack of zigbee architecture.

Q4. Answer any one of following **(03)**

1. Describe GPRS in brief.
2. Draw block diagram of mobile handset and Explain its blocks.

Gokhale Education Society's

HPT Arts and RYK Science College Nasik

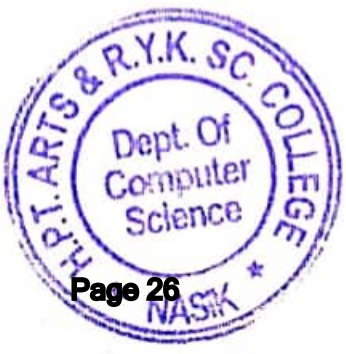
Department of Computer Science

Subject: ELC-242(Wireless communication and IOT)

S.Y.B.Sc (CS) Sem-IV Internal Examination-Mar-2023

Sr. No.	Seat no.	Name	Q1(04)	Q2(04)	Q3(04)	Q4(03)	Total (15)
1	11836	Abhonkar Harsh Nilesh	4	3	4	3	14
2	11835	Adhikari Abhishek Indarsingh	3	2	3	2	10
3	11837	Agrawal Kunal Kamalkumar	2	3	2	3	10
4	11789	Aher Pranav Prashant	2	1	0	0	3
5	11830	Ahire Tejas Pravin	3	2	2	2	8
6	11791	Bachhav Piyush Bhaskar	3	2	1	3	9
7	11838	Badoge Hemanshu Vitthal	1	3	0	2	6
8	11792	Barve Chirag Atul	1	1	1	0	3
9	11839	Bhamare Mayur Arun	2	1	1	3	7
10	11840	Bhogale Kashish Nilesh	4	4	4	1	13
11	11841	Bhuiya Arpita Rajib	4	2	1	2	9
12	11856	Birari Nayan Milind	4	2	1	2	9
13	11842	Chanda Disha Mohan	4	2	3	3	13
14	11793	Chaudhari Malhar Vijay	4	1	0	0	5
15	11794	Das Krishna Nanddev	2	1	0	0	3
16	11843	Deore Aishwarya Chetan	2	2	1	0	5
17	11795	Derle Tejas Anil	1	2	1	1	5
18	11832	Deshmukh Vijay Rajendra	0	0	0	0	0
19	11796	Dhage Snehal Namdev	1	1	1	0	3
20	11797	Gahiwad Sakshi Sanjay	2	2	1	0	5
21	11798	Gaikar Sejal Anil	4	2	1	2	9
22	11799	Gangurde Aaditi Shamrao	2	1	2	0	5
23	11800	Gangurde Dhanashri Mahendra	ab	ab	ab	ab	ab
24	11845	Gupta Samiksha Manoj	3	3	2	3	11
25	11801	Harikmahale Someshwar Ravindra	2	1	1	1	5
26	11788	Jadhav Abhishek Anil	3	1	1	2	7
27	11803	Jadhav Payal Dadabhau	1	3	2	3	9
28	11804	Kadam Lisa Bhushan	1	1	1	0	3
29	11847	Kamat Gaurangi Girish	4	4	4	3	15
30	11805	Khutade Sanika Prashant	3	3	2	1	9
31	11807	Kor Pritee Mohan	1	1	0	0	2
32	11848	Kshirsagar Sakshi Balnath	3	2	1	3	8
33	11849	Kulkarni Aditya Nilesh	4	4	4	3	15
34	11850	Kulkarni Sarvesh Gajanan	3	2	1	3	9
35	11851	Kulkarni Vansh Mangesh	0	3	1	1	5
36	11809	Kushare Roshan Lalit	3	1	1	1	6
37	11844	Lahamge Gaurav Santosh	3	1	1	0	5
38	11852	Lawar Ninad Bipin	3	3	2	3	11
39	11854	Mahale Shravan Vikas	4	4	4	3	15
40	11802	Malve Isha Ashish	2	3	2	3	10
41	11810	Mandal Arnab Pijush	1	2	2	0	5
42	11812	Mehere Gitesh Mohansingh	4	1	2	3	10
43	11814	More Yogesh Subhash	3	2	2	0	7
44	11813	More Pooja Rajendra	2	2	2	0	6
45	11815	Naikwade Sanket Ramesh	3	2	2	0	7
46	11857	Nikumbh Anurag Nilesh	3	3	3	0	9

47	11828	Pagar Shraddha Shashikant	3	2	1	0	6
48	11817	Pandirkar Atharva Sachin	3	2	1	2	8
49	11861	Patil Yukta Keshav	4	4	4	3	15
50	11818	Patil Chetana Kiran	3	3	2	2	10
51	11859	Patil Gaurav Subhash	3	2	4	3	12
52	11855	Patil Mrunal Manoj	4	4	2	3	13
53	11860	Patil Prajwal Sunil	4	2	1	3	10
54	11820	Pawar Prathmesh Sandip	4	2	2	3	11
55	11862	Pawar Sakshi Chandrakant	4	4	4	3	15
56	11821	Phuge Arjun Narayan	3	1	2	2	8
57	11863	Pisolkar Eshwari Pankaj	3	3	2	2	10
58	11822	Potinde Gayatri Nivrutti	3	2	1	2	8
59	11874	Prasad Vibhav Fulchand	0	2	2	3	7
60	11823	Pundlik Janki Ashutosh	0	3	2	1	6
61	11864	Rajput Simrankaur Gurmukhsingh	4	3	2	2	11
62	11806	Rathod Komal Ramesh	2	2	4	0	7
63	11865	Ratnaparkhi Satej Yogesh	3	2	0	0	5
64	11867	Sabde Gargi Sadanand	4	3	2	2	11
65	11868	Saini Kamlesh Hemraj	2	3	3	3	12
66	11869	Sawant Archana Sandip	2	3	3	2	10
67	11870	Sawant Sahil Vilas	2	2	3	1	8
68	11824	Shaikh Gufran Abdul Kadir	3	2	2	1	8
69	11871	Shaikh Nashra Raju	3	3	4	3	13
70	11826	Shardul Harsh Avinash	ab	ab	ab	ab	ab
71	11827	Shewale Harshal Shantaram	2	2	1	1	6
72	11846	Singh Himanshu Kumar Jitendra Kumar	3	2	4	2	11
73	11829	Sonar Prajakta Prakash	3	1	1	1	6
74	11872	Sonawane Samiksha Uttam	3	3	4	3	13
75	11831	Thorat Yash Chhotu	2	2	2	1	7
76	11873	Ubale Sahil Sunil	3	2	3	1	9
77	11808	Vaishnav Krish Durgesh	2	1	2	1	6
78	11875	Waghchaure Om Namdev	4	2	3	3	12
79	11866	Yadav Roshan Ravindra	3	2	3	3	11
80	11833	Yadav Sachin Ramakant	3	2	3	3	11
81	11816	Pagare Shrilaxmi Chandrakant	3	2	3	2	10
82	11858	Nere Om Nitin	3	2	3	3	11
83	11790	Attar Mohamad Jakki Samir	1	0	0	1	2
84	11853	Mahale Sakshi Sunil	4	4	4	2	14
85	11834	Ansari Zahid Qaium	3	2	1	1	7
86	11811	Mechkar Rupali Subhash	ab	ab	ab	ab	ab
87	11825	Shaikh Yasir Tarique	1	0	0	1	2
88	11819	Patil Shrushti Mahesh	ab	ab	ab	ab	ab



CO Mapping

Sr. No	Seat no.	Name	Q1(04)	Q2(04)	Q3(04)	Q4(03)	Total (15)
		Course Objective/Outcomes	CO2	CO3	CO1	CO4,C05	
			To learn and understand cellular system	To learn and understand architecture of short range Wireless Technologies	Know working of wireless technologies such as Mobile communication GSM GP R	Get introduced to upcoming technology of Internet of Things Explore themselves and develop new IoT based applications	
1	11836	Abhonkar Harsh Nilesh	4	3	4	3	14
2	11835	Adhikari Abhishek Indarsingh	3	2	3	2	10
3	11837	Agrawal Kunal Kamalkumar	2	3	2	3	10
4	11789	Aher Pranav Prashant	2	1	0	0	3
5	11830	Ahire Tejas Pravin	3	2	2	2	8
6	11791	Bachhav Piyush Bhaskar	3	2	1	3	9
7	11838	Badoge Hemanshu Vitthal	1	3	0	2	6
8	11792	Barve Chirag Atul	1	1	1	0	3
9	11839	Bhamare Mayur Arun	2	1	1	3	7
10	11840	Bhogale Kashish Nilesh	4	4	4	1	13
11	11841	Bhuiya Arpita Rajib	4	2	1	2	9
12	11856	Birari Nayan Milind	4	2	1	2	9
13	11842	Chanda Disha Mohan	4	2	3	3	13
14	11793	Chaudhari Malhar Vijay	4	1	0	0	5
15	11794	Das Krishna Nanddev	2	1	0	0	3
16	11843	Deore Aishwarya Chetan	2	2	1	0	5
17	11795	Derle Tejas Anil	1	2	1	1	5
18	11832	Deshmukh Vijay Rajendra	0	0	0	0	0
19	11796	Dhage Snehal Namdev	1	1	1	0	3
20	11797	Gahiwad Sakshi Sanjay	2	2	1	0	5
21	11798	Gaikar Sejal Anil	4	2	1	2	9
22	11799	Gangurde Aaditi Shamrao	2	1	2	0	5
23	11800	Gangurde Dhanashri Mahendra	ab	ab	ab	ab	ab
24	11845	Gupta Samiksha Manoj	3	3	2	3	11
25	11801	Harikmahale Someshwar Ravindra	2	1	1	1	5
26	11788	Jadhav Abhishek Anil	3	1	1	2	7
27	11803	Jadhav Payal Dadabhau	1	3	2	3	9
28	11804	Kadam Lisa Bhushan	1	1	1	0	3
29	11847	Kamat Gaurangi Girish	4	4	4	3	15
30	11805	Khutade Sanika Prashant	3	3	2	1	9
31	11807	Kor Pritee Mohan	1	1	0	0	2
32	11848	Kshirsagar Sakshi Balnath	3	2	1	3	8
33	11849	Kulkarni Aditya Nilesh	4	4	4	3	15
34	11850	Kulkarni Sarvesh Gajanan	3	2	1	3	9
35	11851	Kulkarni Vansh Mangesh	0	3	1	1	5
36	11809	Kushare Roshan Lalit	3	1	1	1	6
37	11844	Lahamge Gaurav Santosh	3	1	1	0	5
38	11852	Lawar Ninad Bipin	3	3	2	3	11
39	11854	Mahale Shravan Vikas	4	4	4	3	15
40	11802	Malve Isha Ashish	2	3	2	3	10
41	11810	Mandal Arnab Pijush	1	2	2	0	5

42	11812	Mehere Gitesh Mohansingh	4	1	2	3	10
43	11814	More Yogesh Subhash	3	2	2	0	7
44	11813	More Pooja Rajendra	2	2	2	0	6
45	11815	Naikwade Sanket Ramesh	3	2	2	0	7
46	11857	Nikumbh Anurag Nilesh	3	3	3	0	9
47	11828	Pagar Shraddha Shashikant	3	2	1	0	6
48	11817	Pandirkar Atharva Sachin	3	2	1	2	8
49	11861	Patil Yukta Keshav	4	4	4	3	15
50	11818	Patil Chetana Kiran	3	3	2	2	10
51	11859	Patil Gaurav Subhash	3	2	4	3	12
52	11855	Patil Mrunal Manoj	4	4	2	3	13
53	11860	Patil Prajwal Sunil	4	2	1	3	10
54	11820	Pawar Prathmesh Sandip	4	2	2	3	11
55	11862	Pawar Sakshi Chandrakant	4	4	4	3	15
56	11821	Phuge Arjun Narayan	3	1	2	2	8
57	11863	Pisolkar Eshwari Pankaj	3	3	2	2	10
58	11822	Potnde Gayatri Nivrutti	3	2	1	2	8
59	11874	Prasad Vibhav Fulchand	0	2	2	3	7
60	11823	Pundlik Janki Ashutosh	0	3	2	1	6
61	11864	Rajput Simrankaur Gurmukhsingh	4	3	2	2	11
62	11806	Rathod Komal Ramesh	2	2	4	0	7
63	11865	Ratnaparkhi Satej Yogesh	3	2	0	0	5
64	11867	Sabde Gargi Sadanand	4	3	2	2	11
65	11868	Saini Kamlesh Hemraj	2	3	3	3	12
66	11869	Sawant Archana Sandip	2	3	3	2	10
67	11870	Sawant Sahil Vilas	2	2	3	1	8
68	11824	Shaikh Gutran Abdul Kadir	3	2	2	1	8
69	11871	Shaikh Nashra Raju	3	3	4	3	13
70	11826	Shardul Harsh Avinash	ab	ab	ab	ab	ab
71	11827	Shewale Harshal Shantaram	2	2	1	1	6
72	11846	Singh Himanshu Kumar Jitendra Kumar	3	2	4	2	11
73	11829	Sonar Prajakta Prakash	3	1	1	1	6
74	11872	Sonawane Samiksha Uttam	3	3	4	3	13
75	11831	Thorat Yash Chhotu	2	2	2	1	7
76	11873	Ubale Sahil Sunil	3	2	3	1	9
77	11808	Vaishnav Krish Durgesh	2	1	2	1	6
78	11875	Waghchaure Om Namdev	4	2	3	3	12
79	11866	Yadav Roshan Ravindra	3	2	3	3	11
80	11833	Yadav Sachin Ramakant	3	2	3	3	11
81	11816	Pagare Shrilaxmi Chandrakant	3	2	3	2	10
82	11858	Nere Om Nitin	3	2	3	3	11
83	11790	Attar Mohamad Jakki Samir	1	0	0	1	2
84	11853	Mahale Sakshi Sunil	4	4	4	2	14
85	11834	Ansari Zahid Qaium	3	2	1	1	7
86	11811	Mechkar Rupali Subhash	ab	ab	ab	ab	ab
87	11825	Shaikh Yasir Tarique	1	0	0	1	2
88	11819	Patil Shrushti Mahesh	ab	ab	ab	ab	ab
		Total	223	180	163	140	
		Average	2.65	2.14	1.85	1.66	

		Criteria (50%)	53	27	22	42	
		Scale3	1.89	0.96	0.787	1.5	
		Mapping	Fully Aligned	Partially Aligned	Partially Aligned	Fully Aligned	
		Point on Scale of 3	0-0.5	0.5-1.0	1.00-1.5	1.5 – 3.0	
			Not Aligned	Partially Aligned	Mostly Aligned	Fully Aligned	

Action Taken/Suggestions

- Teacher can more focus on the explanation of wireless architecture and short range wireless technology.
- Students can be motivated to practice real life situations on wi-fi technology.
- Teacher can give more and more real life examples of wi-fi connectivity and their technology details.

Subject Teacher

Mrs.M.V.Gite

Head of Department

Nilesh B. Mahajan

College Stamp

CO Mapping

Department of Computer Science
T.Y.B.Sc. (Computer Science)- Sem -VI
Course Type :DSEC – V **Course Code: CS - 363**
Course Title : Web Technologies – II
Syllabus (2019 Pattern)

Teaching Scheme	No. of Credits	Examination Scheme
3 Lect / week	2	IE : 15 marks UE: 35 marks

Prerequisites
- HTML5,CSS
- Core PHP
- Bootstrap framework utility

Course Objectives
- To Learn different technologies used at client Side Scripting Language
- To Learn XML and XML parsers.
- To One PHP framework for effective design of web application.
- To Learn Java Script to program the behavior of web pages.
- To Learn AJAX to make our application more dynamic.
- Framework has

Course Outcomes
On completion of the course, student will be able to–
- Build dynamic website.
- Using MVC based framework easy to design and handling the errors in dynamic website.

Course Contents		**6 Lect**
Chapter 1	**Introduction to Web Techniques**	

Variables
Server information
Processing forms
Setting response headers
Maintaining state
PHP error handling

Chapter 2	**XML**	**6 Lect**

What is XML?
XML document Structure
PHP and XML
XML parser
The document object model
The simple XML extension
Changing a value with simple XML

Chapter 3	**Java Script and Jquery**	**10 Lect**

Overview of JavaScript
Object Orientation and JavaScript Basic Syntax(JS datatypes, JS variables)
Primitives, Operations and Expressions
Screen Output and keyboard input(Verification and Validation)
JS Control statements and JS Functions
JavaScript HTML DOM Events(onmouseup, onmousedown, onclick, onload, onmouseover, onmouseout).

JS Strings and JS String methods

JS popup boxes(alert, confirm, prompt).
Jquery library , Including jquery library in page
Jquery selector , DOM manipulation using jquery

Chapter 4	AJAX	6 Lect

Introduction of AJAX
AJAX web application model
AJAX –PHP framework
Performing AJAX validation
Handling XML data using php and AJAX
Connecting database using php and AJAX

Chapter 5	PHP framework CodeIgniter	8 Lect

CodeIgniter - Overview, Installing CodeIgnite
Application Architecture
MVC Framework , Basic concept of CodeIgniter, Libraries
Working with databases
Load external JS and CSS page & redirecting from controller , Adding JS and CSS ,
Page redirection.
Loading dynamic data on page & session management, cookies management

Reference Books:

1. **Programming PHP By Rasmus Lerdorf and Kevin Tatroe O'Reilly publication**
2. **Beginning PHP 5, Wrox publication**
3. **AJAX Black Book Kogent solution**
4. **Mastering PHP BPB Publication**
5. **Professional Codeigniter By Thomas Myer ,Wrox Publication,**
6. **Codeihniter 2 CookBook By Rob Foster ,PACKT Publication ,**
7. **JQuery CookBook, O'reilly Publication.**

Ref. Links:

1. **www.php.net.in**
2. **www.W3schools.com**
3. **https://www.tutorialspoint.com/codeigniter/index.htm**
4. **https://api.jquery.com/**
5. **http://codeigniter.com/docs**

QUESTION PAPER

Gokhale Education Society's
HPT Arts and RYK Science College Nasik
Department of Computer Science
Subject: CS – 363(Web Technologies – II)
Sem-VI Internal Exam
Date: 12/03/2024

Marks: 15 Class: T.Y.B.Sc (CS)

Q.1) Fill in the Blanks. **(4)**

1. With jQuery we select (query) _____elements and perform "actions" on them.
2. SimpleXML is a _____-based parser.
3. The _____function to send cookie to the browser.
4. The _____global array contains information about any uploaded files.

Q.2) Answer the following in one sentence: **(4)**

1) How the variables declared in javascript?
2) What is jQuery?
3) Which function is used to print an error message and exit from current code?
4) List out parts of XML document structure.

Q.3) Short Answer Questions. (Any 2) **(4)**

1) List the items available in the $_FILES array.
2) What are different techniques to maintain state in php?
3) List the applications of XML.

Q.4) Answer any One of the following. **(3)**

1) Write a javascript code to display message- "Exams are near, prepare well for it" using alert, pr
and confirm boxes. Accept proper input from user and display message accordingly.
2) Write a PHP script to read item.xml file contains item_no, item_name, type etc. By using simple
XML prints details in tabular form.

Gokhale Education Society's

HPT Arts and RYK Science College Nasik

Department of Computer Science

Subject: CS-363(Web Technologies-II)

T.Y.B.Sc (CS) Sem-VI Internal Examination-Mar-2023

Roll No.	Name	Q1(04)	Q2(04)	Q3(04)	Q4(03)	Total(15)
1	Agrwal Sevita shailesh	3	2	2	1	8
2	Chinmay Bapat	Ab	Ab	Ab	Ab	Ab
3	Sanchi barde	3	2	3	3	11
4	Om milind bhagwat	3	1	2	0	6
5	Astha s bhamre	2	4	3	3	12
6	Darshan bhasme	3	4	2	3	12
7	Chaitanya m borse	3	3	2	0	8
8	Tejal totaram choudhary	1	2	3	2	8
9	Mansi s dashpute	4	3	3	3	13
10	Vaibhavi narendra derle	4	3	4	3	14
11	Jay deshmukh	3	3	3	3	12
12	Shriraj narendra dharmadhikari	4	4	1	3	12
13	Yash pravin dugad	4	3	4	3	14
14	Shreya Chandrashekhar dusane	4	2	2	3	11
15	Gangurde Manasi k	3	1	2	3	9
16	Ghaywat Nayan Gajanan	2	2	2	0	6
17	Dhruv R.Kanojia	3	2	3	0	8
18	Bhanupratap c kanojia	2	3	4	0	9
19	Monu k kanojia	4	4	4	3	15
20	Anjali Deepak karle	4	2	1	0	7
21	Abhijeet Deepak khairnar	3	3	2	2	10
22	Vanshika m khairnar	4	4	4	3	15
23	Maruf parvej kotwal	3	3	1	3	20
24	Kulkarni mugdha sachin	3	3	0	0	6
25	Mahajan mitali dnyaneshwar	4	4	4	3	15
26	Ganesh rajendra mali	4	4	4	3	15
27	Yash manohar meshram	4	3	4	2	13
28	Mahesh ranu more	4	4	3	3	14
29	Nalge subham Prakash	3	1	2	0	6
30	Rupesh Vinayak Nikam	3	1	2	0	6
31	Nikam tejas bharat	2	2	3	1	8
32	Purnendu pandey	3	3	3	1	10
33	Sweetykumarai Pandit	2	4	4	3	13
34	Manas rajendra pardeshi	2	1	1	3	7
35	Arya manish Pathak	3	3	3	3	12
36	Varad prashant Pathak	3	2	3	1	9
37	Nikita girish patil	2	2	2	1	7
38	Patil sakshi	3	3	2	3	11
39	Shruti Prakash patil	2	3	3	3	11
40	Sakshi vishwas pawar	4	2	2	1	9
41	Siddhi rajendra pawar	2	2	2	0	6
42	Sanat c pillai	2	3	4	3	12
43	Swapnil r pol	3	3	4	2	12
44	Juhi g rawat	3	1	2	2	8
45	Harshada rajendra salunkhe	2	1	2	3	8
46	Durvesh Sangram Salve	2	2	1	1	6
47	Shaikh Piya Hasibul	1	2	1	2	6
48	Tanvi Nitin Shimpi	2	2	2	2	8
49	Rohit Gopal Shinde	2	2	2	3	9

50	Singh Aman	2	1	3	2	8
51	Raj Abhay Singh	2	3	4	3	12
52	Singh Shavan	2	3	3	2	10
53	Jaykumar Sharad Talekar	2	2	2	0	06
54	Abhishekh R.Telangi	3	1	2	0	06
55	Atharv Sanjay Upasani	4	4	4	3	15
56	Pranit Prakash Visave	3	4	3	3	13
57	Payal Rajendra Wakchaure	4	2	2	3	11
58	Yadav Abhishek Pradeepkumar	2	1	0	3	06
59	Nikita Yadav	2	3	3	3	11
60	Sunidhi Jaiprakash Yadav	3	4	4	3	14
61	Aarya Jayant Gaikwad	4	4	4	3	15
62	Kainat Masood Shaikh	4	4	4	3	15
63	Gaurav Pramod Nikam	3	4	1	3	11
64	Kunal Sunil Ruperi	3	4	3	3	13
65	Aniksha Ashok Jadhav	2	4	3	1	10
66	Priyanshu Nitin Pathak	2	4	1	2	9
67	Tejas Suresh Patil	3	4	1	2	10
68	Omkar Kailas Lonkar	3	4	3	2	12
69	Shruti Sachin Patil	3	4	3	2	12
70	Vishal S. Pandit	3	3	3	1	10
71	Vishal Premchand Bharti	3	2	3	3	11
72	Khushal Rajendra Gil	2	4	3	3	12
73	Ambre Pratiksha Nivrutti	3	4	4	3	14
74	Abhishek C. Pagare	3	4	1	1	9
75	Kapote Chaitanya Santosh	3	4	3	2	12
76	Deepak Maurya	2	1	2	1	6
77	Suraj Patil	3	4	3	2	12
78	Yeola Aniket Bhalchandra	2	4	2	1	9
79	Yadav Rani Mahendra	2	2	3	3	10
80	Yash Pradhan	2	1	1	3	7

CO Mapping						
Course Objective/Outcomes						
		CO1	CO1,CO2	CO2	CO2	
		Build dynamic website	Build dynamic website Using MVC based framework easy to design and handling the errors in dynamic website	Using MVC based framework easy to design and handling the errors in dynamic website	Using MVC based framework easy to design and handling the errors in dynamic website	
Roll No.	Name	Q1(04)	Q2(04)	Q3(04)	Q4(03)	Total (15)
1	Agrwal Sevita shailesh	3	2	2	1	8
2	Chinmay Bapat	Ab	Ab	Ab	Ab	Ab
3	Sanchi barde	3	2	3	3	11
4	Om milind bhagwat	3	1	2	0	6
5	Astha s bhamre	2	4	3	3	12
6	Darshan bhasme	3	4	2	3	12
7	Chaitanya m borse	3	3	2	0	8
8	Tejal totaram choudhary	1	2	3	2	8
9	Mansi s dashpute	4	3	3	3	13
10	Vaibhavi narendra derle	4	3	4	3	14
11	Jay deshmukh	3	3	3	3	12
12	Shriraj narendra dharmadhikari	4	4	1	3	12
13	Yash pravin dugad	4	3	4	3	14
14	Shreya Chandrashekhar dusane	4	2	2	3	11
15	Gangurde Manasi k	3	1	2	3	9
16	Ghaywat Nayan Gajanan	2	2	2	0	6
17	Dhruv R.Kanojia	3	2	3	0	8
18	Bhanupratap c kanojia	2	3	4	0	9
19	Monu k kanojia	4	4	4	3	15
20	Anjali Deepak karle	4	2	1	0	7
21	Abhijeet Deepak khairnar	3	3	2	2	10
22	Vanshika m khairnar	4	4	4	3	15
23	Maruf parvej kotwal	3	3	1	3	20
24	Kulkarni mugdha sachin	3	3	0	0	6
25	Mahajan mitali dnyaneshwar	4	4	4	3	15
26	Ganesh rajendra mali	4	4	4	3	15
27	Yash manohar meshram	4	3	4	2	13
28	Mahesh ranu more	4	4	3	3	14
29	Nalge subham Prakash	3	1	2	0	6
30	Rupesh Vinayak Nikam	3	1	2	0	6
31	Nikam tejas bharat	2	2	3	1	8
32	Purnendu pandey	3	3	3	1	10
33	Sweetykumarai Pandit	2	4	4	3	13
34	Manas rajendra pardeshi	2	1	1	3	7
35	Arya manish Pathak	3	3	3	3	12
36	Varad prashant Pathak	3	2	3	1	9
37	Nikita girish patil	2	2	2	1	7
38	Patil sakshi	3	3	2	3	11
39	Shruti Prakash patil	2	3	3	3	11
40	Sakshi vishwas pawar	4	2	2	1	9
41	Siddhi rajendra pawar	2	2	2	0	6
42	Sanat c pillai	2	3	4	3	12
43	Swapnil r pol	3	3	4	2	12
44	Juhi g rawat	3	1	2	2	
45	Harshada rajendra salunkhe	2	1	2	3	

46	Durvesh Sangram Salve	2	2	1	1	6
47	Shaikh Piya Hasibul	1	2	1	2	6
48	Tanvi Nitin Shimpi	2	2	2	2	8
49	Rohit Gopal Shinde	2	2	2	3	9
50	Singh Aman	2	1	3	2	8
51	Raj Abhay Singh	2	3	4	3	12
52	Singh Shavan	2	3	3	2	10
53	Jaykumar Sharad Talekar	2	2	2	0	06
54	Abhishekh R.Telangi	3	1	2	0	06
55	Atharv Sanjay Upasani	4	4	4	3	15
56	Pranit Prakash Visave	3	4	3	3	13
57	Payal Rajendra Wakchaure	4	2	2	3	11
58	Yadav Abhishek Pradeepkuma	2	1	0	3	06
59	Nikita Yadav	2	3	3	3	11
60	Sunidhi Jaiprakash Yadav	3	4	4	3	14
61	Aarya Jayant Gaikwad	4	4	4	3	15
62	Kainat Masood Shaikh	4	4	4	3	15
63	Gaurav Pramod Nikam	3	4	1	3	11
64	Kunal Sunil Ruperi	3	4	3	3	13
65	Aniksha Ashok Jadhav	2	4	3	1	10
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68	Omkar Kailas Lonkar	3	4	3	2	12
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70	Vishal S. Pandit	3	3	3	1	10
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73	Ambre Pratiksha Nivrutti	3	4	4	3	14
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76	Deepak Maurya	2	1	2	1	6
77	Suraj Patil	3	4	3	2	12
78	Yeola Aniket Bhalchandra	2	4	2	1	9
79	Yadav Rani Mahendra	2	2	3	3	10
80	Yash Pradhan	2	1	1	3	7
	Total	223	220	203	162	
	Average	2.822	2.78	2.56	2.05	
	Criteria (50%)	78	68	66	56	
	Scale3	2.925	2.55	2.475	2.1	
	Mapping	**Fully Aligned**	**Fully Aligned**	**Fully Aligned**	**Mostly Aligned**	
	Point on Scale of 3	0-0.75	0.75-1.5	1.5-2.25	2.25 – 3.0	
		Not Aligned	**Partially Aligned**	**Mostly Aligned**	**Fully Aligned**	

Action Taken/Suggestions

- Teacher can continue to use the same methodology
- Students can be motivated to practice real life situations.
- Teacher can continue to teach Java Script to program the behavior of web pages.

Subject Teacher

Mrs.P.D.Govardhane

P.T. ARTS & R.Y.K. SC. COLLEGE Dept. Of Computer Science NASIK

Head of Department

Prof.N.B.Mahajan

SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE
T.Y. B.Sc. ELECTRONIC SCIENCE
2021 PATTERN CBCS
Discipline Specific Elective Course

EL 354: Paper IV: Nanoelectronics

SEMESTER V **CREDITS: 2** **LECTURES: 36**

Course Outcomes: After completing the course, the students will be able to
CO1: Understand basic concepts of nano electronic devices and nano technology.
CO2: Understand the electron transport mechanism in nanostructures.
CO3: Understand techniques of characterization of nanostructures.
CO4: Understand different devices constructed using nanotechnology.

UNIT 1: Introduction to Nanotechnology and Nanoelectronics (5 LECTURES)
Overview of basic Nano electronics, Limitations of conventional microelectronics, Top down approach, Bottom up approach, Flash Memory, Applications of nanotechnology in nanoelectronics. Introduction to metamaterials

UNIT 2: Electron Transport in Nanostructures (5 LECTURES)
Resonant-tunneling diode, electrons in square quantum wells of finite depth, electrons in quantum wire, electrons in quantum dots, Density of states of electrons in nanostructures

UNIT 3: Characterization of Nanostructures (12 LECTURES)
Introduction to characterization of nanostructures: Principle of operation of Scanning electron microscope (SEM), Transmission Electron Microscope (TEM), Scanning Tunneling Microscope (STM), X-Ray Diffraction analysis (XRD), UV-Vis absorption Spectrum

UNIT 4: Materials for Nanoelectronics and Devices (14 LECTURES)
Materials: Semiconductors nanoparticles, Organic semiconductors, Lattice-matched and pseudomorphic heterostructures, Inorganic nanowires, Carbon nanomaterials: nanotubes and fullerenes
Devices: Coulomb Blockade, The Single-Electron Transistor (SET), Carbon Nanotube Transistors (CNT), Semiconductor Nanowire, Quantum well laser, quantum dot LED, quantum dot laser, MOSFETS

RECOMMENDED BOOKS:
1. Nanotechnology: Principles and Practices, Sulbha K. Kulkarni, Springer 2008
2. Introduction to Nanoelectronics Science, nanotechnology, Engineering and Applications, V. Mitin ,Viatcheslav A. Kochelap , Michael A. Stroscio Vladimir, Cambridge University Press 2008

G.E. Society's
H.P.T. Arts & R.Y.K. Sc. College, Nashik – 422 005.
T.Y. B.Sc. (Electronic Science) - I Term 2021-22
Internal test
Paper IV - Nanoelectronics

Marks: 15 **Date: 06/01/2022**

Q.A) Attempt any FIVE of the following. CO1 **[05]**

1) What is Top-down approach?
2) What is Photo resist? Give its types
3) List the limitations of microelectronics.
4) Define quantum well.
5) What is the principle of SEM?
6) List the applications of Nanotechnology.
7) What is flash memory?

Q.B) Attempt any TWO of the following. CO2 **[10]**

1) What is density of states ?Show diagrammatically density of states in bulk crystal, quantum well and quantum wire.
2) What is lithography? Explain different steps involved in optical Lithography.
3) Explain construction and working of resonant tunneling diode.
4) Explain with neat diagram Transmission Electron Microscope.
5) Differentiate between SEM and TEM.
6) What is quantum dot? Explain electron transport in quantum dot.

G.E. Society's
HPT Arts and RYK Science College
Department of Electronics 2021-22
Internal assessment
TY-B.Sc.
Paper IV- Nanoelectronics, SEM-I

Sr. No.	Roll No.	Name of the Students	Gender	Written Test (15 Marks)		Home Assignment (10 marks)	Presentation (05 Marks)	Internal Marks (Out of 30)
				Q1	Q2			
1	1	Prafull Adhangale	Male	5	9	6	4	24
2	2	Atharva Ambalkar	Male	4	4	8	3	19
3	3	Abhishek Garud	Male	4	5	4	4	17
4	4	Ayush Kathe	Male	3	7	7	2	17
5	5	Siddharth Kakad	Male	3	4	7	3	20
6	6	Pratik Kankareja	Male	5	8	5	3	21
7	7	Sachin Kale	Male	2	8	8	4	14
8	8	Anjali Lal	Female	5	7	5	4	21
9	9	Apeksha Pagare	Female	5	8	6	3	22
10	10	Deepak Pawade	Male	2	7	7	3	11
11	11	Chaitanya Rathod	Male	5	8	6	2	21
12	12	Samarth Raskar	Male	5	7	8	4	24
13	13	Shubhangi Shinde	Female	4	7	9	4	24
14	14	Saurabh Dhotre	Male	3	9	6	3	21
15	15	Gauri Girase	Female	5	8	7	4	24

02/12/2024

Head
Electronics Dept
HPT/RYK College
Nashik - 5

G.E. Society's
HPT Arts and RYK Science College
Department of Electronics 2021-22
Internal assessment & Course Outcome Mapping Analysis
TY-B.Sc.
Paper IV- Nanoelectronics, SEM-I

COURSE OBJECTIVE OUTCOMES CO1, CO2, CO3 & CO4.

Sr. No.	Roll No.	Name of the Students	Gender	Written Test (15 Marks)		Home Assignment (10 marks)	Presentation (05 Marks)	Internal Marks (Out of 30)
				CO1	CO2	CO3	CO4	
				Q1	Q2			
1	1	Prafull Adhangale	Male	5	9	6	4	24
2	2	Atharva Ambalkar	Male	4	4	8	3	19
3	3	Abhishek Garud	Male	4	5	4	4	17
4	4	Ayush Kathe	Male	3	7	7	2	17
5	5	Siddharth Kakad	Male	3	4	7	3	20
6	6	Pratik Kankareja	Male	5	8	5	3	21
7	7	Sachin Kale	Male	2	8	8	4	14
8	8	Anjali Lal	Female	5	7	5	4	21
9	9	Apeksha Pagare	Female	5	8	6	3	22
10	10	Deepak Pawade	Male	2	7	7	3	11
11	11	Chaitanya Rathod	Male	5	8	6	2	21
12	12	Samarth Raskar	Male	5	7	8	4	24
13	13	Shubhangi Shinde	Female	4	7	9	4	24
14	14	Saurabh Dhotre	Male	3	9	6	3	21
15	15	Gauri Girase	Female	5	8	7	4	24
TOTAL				60	106	99	50	300
Average				4	7.06	6.6	3.33	20

Partially Aligned	0.75- 1.0	Criteria 60%	13	12	12	13
Mostly Aligned	1.00- 2.00					
Fully Aligned	2.00- 3.00	Scale 3	2.60	2.40	2.40	2.60
Mapping			Fully Aligned	Fully Aligned	Fully Aligned	Fully Aligned

2/12/2024

for

Head
Electronics Dept
HPT College

CO Mapping

Department: English

Subject: **Functional English**

FYBA: Paper II- Oral Communication in English

Syllabus

VOCATIONALIZATION OF UNDERGRADUATE COURSES
FUNCTIONAL ENGLISH
F. Y. B. A. Functional English
(w. e. f. 2019-2020)
(Choice Based Credit System)
(70-Semester-End Exam & 30-Internal Evaluation)

Course Content

FYFE Paper II- Oral Communication in English

Aims and Objectives

1. To introduce students to Oral Skills in English
2. To introduce students to basics of computer
3. To introduce students to various conversational situations

Semester I

Unit I- Conversational Skills I

1) Greetings and Response to Greetings
2) introducing Yourself
3) Introducing Others
4) Joining and Leaving a Conversation

Unit II- Conversational Skills II

1) Simple oral descriptions: describing familiar things, places, persons, pictures etc.
2) Describing simple events, routine activities of oneself and others

Unit III- Key Competency Modules I

1) Basics of Computer
2) MS Office: Word, Excel and Power Point Presentation

Semester II

Unit I- Conversational Skills III

1) Telling stories with the help of Points / Pictures
2) Asking questions to get Information
3) Agreeing, Partly Agreeing and Disagreeing
4) Inviting, Accepting and Declining Invitation

Unit II- Conversational Skills IV

1) Oral Presentation Skills
2) Group Discussion
3) Telephonic Communication

Unit III: Key Competency Modules II

1) Use of Internet – surfing, searching and downloading
2) Use of Mobile Apps for Improving Conversational Skills in English

Question Paper

Gokhale Education Society's

H.P.T Arts and RYK Science College, Nasik -05

FYBA Term End Practical Examination: Oct/Nov 2022

FUNCTIONAL ENGLISH Paper II (Sem-I)

Title of the Paper: Oral Communication in English (11852)

Time: 10.00 am **Marks: 70**

Note: 1) All questions are compulsory.

Q1) Introduce yourself in *any two* of the following ways. CO3 **14**

1. Introduce yourself
2. Introduce yourself as a teacher
3. Introduce yourself as a doctor
4. Introduce yourself as a farmer
5. Introduce yourself as a businessman

Q2) Introducing others (any 2) CO3 **14**

1. Introduce your friend to your uncle.
2. Imagine you are working for Google. Introduce your business colleague with your client.
3. Introduce a local guest to a guest from out-of-town.
4. Imagine that you are meeting your friend after 10 years; introduce him to your spouse.

Q3] Describe the following (any 2) CO1 **14**

1. A movie that you have recently watched.
2. Your favourite singer
3. Describe your favourite building in your hometown.
4. Your favourite sportsperson
5. A book that you have recently read.

Q.4] Describe the following (any 2) CO1 **14**

1. Describe a recent event that made you happy.
2. Your father's daily routine
3. An unhappy incident in your life.
4. A memorable journey
5. Your own daily routine

Q.5) Prepare a layout of PowerPoint presentation containing 7 to 8 slides on any topic of your choice. CO2 **14**

Marklist

Gokhale Education Society's
H.P.T Arts and RYK Science College, Nasik -05
FYBA Semester I PRACTICAL Exam Oct/Nov 2022-23
FUNCTIONAL ENGLISH (Paper-II)
Marks list – Oct/Nov 2022-23
Sub: Oral Communication in English: Key Competency Modules (Paper-II) (11852)

Sr No	Roll No.	Seat No.	Student Name	Q.1 (14M)	Q.2 (14M)	Q.3 (14M)	Q.4 (14M)	Q.5 (14M)	Total (70M)
1		29211	Amruta Bam	11	12	13	12	12	60
2		29222	Bhakti Sonawane	11	11	13	12	11	58
3		29243	Malhar Chitnis	12	12	13	12	12	61
4		29246	Satakshi Darekar	10	10	13	11	10	54
5		29284	Agranee Gite	10	10	12	10	10	52
6		29293	Alfiya Hakim	10	11	11	12	10	54
7		29299	Hrudayi Tambat	11	11	10	10	10	52
8		29312	Vishwanandh Jadhav	09	10	12	07	09	47
9		29313	Khyati Joshi	11	13	13	11	12	60
10		29337	Raheen Kazi	10	10	11	10	12	53
11		29340	Taqee Khan	10	12	13	11	11	57
12		29348	Neha Kothawade	10	09	11	10	09	49
13		29353	Dhanashree Kulkarni	10	11	11	12	12	56
14		29359	Unnati Lavate	11	11	12	13	10	57
15		29367	Mariya Patanwala	09	10	08	10	07	44
16		29379	Maithili Nagarkar	09	10	08	10	06	43
17		29396	Dhanashree Pate	10	11	11	12	09	53
18		29407	Prachi Mandge	10	11	12	12	09	54
19		29420	Gauri Rane	11	12	12	12	12	59
20		29433	Deshna Shah	10	10	10	11	06	47
21		29444	Tushar Sharma	11	10	11	12	10	54
22		29453	Shreya Gajria	11	13	12	13	12	61
23		29466	Dheeraj Tayde	11	11	12	11	09	54
24		29474	Sakshi Tidke	11	11	12	12	11	57
25		29487	Vedashree Pitre	12	11	13	13	13	62
26		29489	Riya Wagh	11	11	11	12	12	57

Kulkarni 5/12/2023
Ms. Aparna Kulkarni
(Internal Examiner)

H.P.T. ARTS & R.Y.K. SCIENCE COLLEGE 05

5/12/2023
Dr. Tushar Patil
(External Examiner)

CO Mapping- Analysis

Sr. No.	Seat No.	Roll No.		Student's Name		Courses Objectives/Outcomes		
					CO3	CO3	CO1	CO1
					Q.1 (14)	Q.2 (14)	Q.3 (14)	Q.4 (14)
1	29211	15		Amruta Bam	11	12	13	12
2	29222	303		Bhakti Sonawne	11	11	13	12
3	29243	54		Malhar Chitnis	12	12	13	12
4	29246	58		Shatakshi Darekar	10	10	13	11
5	29284	100		Agranee Gite	10	10	12	10
6	29293	111		Alifya Hakim	10	11	11	12
7	29299	308		Hrudayi Tambat	11	11	10	10
8	29312	131		Vishwanand Jadhav	9	10	12	7
9	29343	164		Khyati Joshi	11	13	13	11
10	29337	156		Raheen Kazi	10	10	11	10
11	29340	159		Taqee Khan	10	12	13	11
12	29348	169		Neha Kothavade	10	9	11	10
13	29353	175		Dhanashree Kulkarni	10	11	11	12
14	29359	183		Unnati Lavate	11	11	12	13
15	29367	229		Maria Patanwala	9	10	8	10
16	29379	208		Maithili Nagarkar	9	10	8	10
17	29396	230		Dhanashree Pate	10	11	11	12
18	29407	190		Prachi Mandge	10	11	12	12
19	29420	264		Gauri Rayne	11	12	12	12
20	29433	275		Deshna Shah	10	10	10	11
21	29444	285		Tushar Sharma	11	10	11	12
22	29453	86		Shreya Gajaria	11	13	12	13
23	29466	313		Dheeraj Tayade	11	11	12	11
24	29474	323		Sakshi Tidke	11	11	12	12
25	29487	247		Vedashree Pitre	12	11	13	13
26	29489	334		Riya Wagh	11	11	11	12
				Total	272	284	300	293
				Average	10.46154	10.92308	11.53846	11.26923
				Criteria (60%)	26	26	26	25
				Scale 3	3	3	3	2.88
					Fully Aligned	Fully Aligned	Fully Aligned	

Action Taken/Suggestions

- Teacher can continue to use the same methodology
- Students can be motivated to practice real life situations.
- Teacher can continue with skill-oriented approach in the classroom.

Subject Teacher
(sign)

Head of Dept.
(sign)
(Stamp)

College Stamp

Savitribai Phule Pune University, Pune
Proposed Syllabus in History for T.Y.B.A. (Credit system)
From the Academic Year 2021-22
Under the Faculty of Humanities
Discipline Specific Elective Courses (DSE-3C)- (3 Credit)
Semester –V Course Title: Introduction to Historiography

Objectives:

1. To orient students about how History is studied, written and understood.
2. To explain methods and tools of data Collection
3. To study the types of Indian Historiography.
4. To describe importance of Inter-Disciplinary Research.
5. To introduce Students to the basics of Research.

Course Outcomes:

1. Students will be introduced to the information and importance of Historiography.
2. Students will be introduced to the different Methods and Tools of data collection.
3. Students can study the interdisciplinary approach of History.
4. Students will learn about the usefulness of History in the 21st century, its changing perspectives, the new ideas that have been invented, and the importance of History in a competitive World.
5. This curriculum develops Research ability ethodology in Mesearch Rof sand procesHistory

Pedagogy: Lectures / Visual Presentation / Critical Analysis / Assignments / Test/ e-learning
Course Content:

Unit -I: Meaning and Scope of History

a) Definition, Nature & Scope of History
b) History and Social sciences
(Political science, Geography, Economics, Sociology)

Unit -II: Sources of Historical Research

a) Primary, Secondary and Oral sources.
b) Written, Unwritten.
c) Importance of Sources.

Unit -III: Preliminary Operations

a) Problem Formulation
b) Objectives
c) Hypotheses, Research Methods

Unit -IV: Synthetic Operations

a) External Criticism
b) Internal Criticism
c) Interpretation, Foot Note
d) Organizing Research Work, Statistical Data, Outcomes and Bibliography.

Gokhale Education Socirty's
HPT Arts and RYK Science College Nashik
TYBA- Mid Semester Examination – Nov -2022
Subject: DSE-3A (HISTORY)
Paper Title –Introduction to Historiography

Time :45 Min **Mark: 20**

Q 1. Attempt the following Question (Any one) **CO 1** **Mark:10**

1. Explain the definition nature and scope of history
   इतिहासाची व्याख्या स्वरूप व व्याप्ती स्पष्ट करा
2. Explain the relationship between History and Geography
   इतिहास आणि भूगोल यातील परस्पर संबध स्पष्ट करा.

Q. 2. Attempt the following Question. (Any two) **CO 2** **Mark:10**

1. Write a note on Herodotus / हिरोडोटस वर टीप लिहा
2. Explain the importance of primary soures / प्राथमिक साधनांचे महत्व स्पष्ट करा
3. Write in brief about Oral soures / मौखिक साधने याबद्दल थोडक्यात लिहा
4. Write a note on the inscription / शिलालेख वर टीप लिहा

Gokhale Education Society's

H.P.T. Arts & R.Y.K. Science College Prin. T. A. Kulkarni Vidyanagar,

Internal Exam. Nov. 2022 (Jr. Supervisor's Report Form)

Class: T.Y.B.A. Date : 1|12|2022

Subject: History

Total	P	A
	26	

Sr. No	Roll No.	FullName	Signature	Internal (20)	Assignment (10)	Total (30)
1	27	Bhandarkar Aditya Supadu	Bhandarkar	17	08	25
2	0257	Waghmare Rohit Balu		14.	07	21
3	2	Pratiksha Ashok Adhangle		16	08	24
4.	266	Ranjana Krishnakant Shukla	Ranjana	00	08	08
5.	64.	Gangurde Komal Sunil	Komal	08.	07	15
6	40	Prayakta Bharat chavan	P.B.chavan	09	08	17
7	188	Vaishnavi Santosh Rajput		12	08	20
8	148	Arshil Shabir Mansuri		10	09	19
9	41	Sakshi. Rajendra. chavan.	Schavan	11	09	20
10	172	Patil Rohit Bhausaheb		13	08	21
11	147	Sharad Balu manohar		10	09	19
12	101	Riya Bihari Sangid		18.	08	26
13	21	Aniruddha Anand Barve		16	08	24
14	44	Madhura Yogesh Deokuti		17	09	27
15.	125	Khairu Shweta Dattatray		12	08	20
16	205	Vraijesh J. Sapariya		11	09	20
17	128	Siddharth R. Thakkar		10	09	19
18	201	Siddhesh Sumadhan Salve	S.Salve	12	08	20
19	200	Praful Sunil Salve		12	09	21
20	143	Bharat Maheshar Malekar	B.M.Malekar	11	09	20
21	163	Abhishek Ganesh Pagare		08.	08	16
22	129	Khandare Shubham Ashwin		13	08	21
23	122	Sagar Dadaji kasliwal		11	08	19
24	261	Ankush Kashinath Pawar		16	08	24
25	65	Rajesh Bhimrao Gangurde		04	08	12
26	246	Sanket Rajendra Tribhuvan		10	06	16

Jr. Supervisor
Name & Sign.

(26)

Examiner
Name & Sign.

HPatil
Dr. Hemashri Y. Patil.

H.P.T. ARTS & R.Y.K. SCIENCE COLLEGE NASHIK 422 005

Gokhale Education Socirty's
HPT Arts and RYK Science College Nashik
TYBA- Mid Semester Examination – Nov -2022
Subject: DSE-3A (HISTORY)
Paper Title –Introduction to Historiography

Sr. No	Roll No	Student's Name	Course Objectives/Outcomes			
			CO1	CO2	CO3	
			Written Test Q.1(10)	Written Test Q.2(10)	Home Assignment (10)	Total Mark (30)
1	27	Bhandarkar Aditya Supadu	09	08	08	25
2	257	Waghmare Rohit Balu	08	06	07	21
3	02	Adhangle Pratiksha Ashok	08	08	08	24
4	266	Shukla Ranjana Krishnakant	00	00	08	08
5	64	Gangurde komal sunil	04	04	07	15
6	40	Chavan Prajakta Bharat	05	04	08	17
7	188	Rajput Vaishnavi Santosh	06	06	08	20
8	148	Mansuri Arshil Shabir	06	04	09	19
9	41	Chavan Sakshi Rajendra	06	05	09	20
10	172	Patil Rohit Bhausaheb	07	06	08	21
11	147	Manohar Sharad Balu	06	04	09	19
12	101	Jangid Riya Bihari	09	09	08	26
13	21	Barve Aniruddha Anand	08	08	08	24
14	44	Deokute Madhura Yogesh	09	08	09	27
15	125	Khaire Shweta Dattatray	06	06	08	20
16	205	Sapariya Vrajesh Jitendra	06	05	09	20
17	128	Khairnar Siddharth Rajendra	06	04	09	19
18	201	Salve Siddhesh Samadhan	06	06	08	20
19	200	Salve Praful Sunil	06	06	09	21
20	143	Malekar Bharat Manohar	06	05	09	20
21	163	Pagare Abhishek Ganesh	05	03	08	16
22	129	Khandare Shubham Ashruji	07	06	08	21
23	122	Kashid Sagar Daulat	06	05	08	19
24	261	Pawar Ankush Kashinath	08	08	08	24
25	65	Gangurde Rajesh Bhimrao	04	00	08	12
26	246	Tribhuvan Sanket Rajendra	06	04	06	16

21	13	26	20
2.42	1.5	3	2.30
Fully Aligned	Mostly Aligned	Fully Aligned	Fully Aligned

Action Taken/Suggestions

- Teacher can continue to use the same methodology
- Students can be motivated to practice real life situations.
- Teacher can continue with skill-oriented approach in the classroom.

Subject Teacher
(sign)

(Stamp)
College Stamp

Head of Dept.
(sign)

HEAD
DEPARTMENT OF HISTORY
H.P.T. Art's & R.Y.K. Sci.College,
Nashik-422 005

CO Mapping

Department – Library & Information Science

Subject - MLC22-Information and Communication Technology Applications in LIS Practice

Class – Master in Library & Information Science (M.Lib.I.Sc)

Aim:

The purpose of this papa is provide knowledge about the ICT and its importance in organization and services of library and information centers

Objectives:

1. **To provide students with hands-on-experience of various tools of Information Technology and their practical application.**
2. **To develop skills in webpage designing.**
3. **To develop the skills of creating electronic content and its digital preservation and access.**

Unit-1: Application of IT in Academic writing

Drawing a diagram with the help of-draw.io
Inserting a Column Chart of data in Excel
Basic use of Mendeley Software.
Introduction to various templates of academic writings

Unit-2: Digitizing and Preservation of E-contents

Digitization of documents (scanning, Pdf Conversion of word and image)
YouTube Channel Creation.(Uploading a Video)

Unit-3: Digital Copyright Protection

Online Plagiarism Checking Practice

Unit-4: Website Designing

Designing Library Website.

Suggested Pedagogy

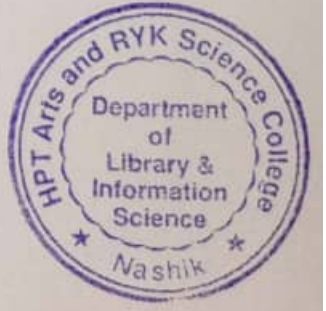
Classroom Lecture and discussion, Pre-reading material for self-study, Practical session of IT Lab, Working in different sections of the library during Library hours, Question and Answer, Group Discussion, Project on Database Creation etc

Suggested Assessments

PPT Presentation, Assignments, Peer assessment,

Learning Outcome

1. Familiarize with various softwares and its application in academic writings.
2. Understand the process of digitization and preservation of e-contents.
3. Able to use plagiarism softwares.
4. Create library website.



Gokhale Education Society's
H.P.T. Arts & R.Y.K. Science, Nashik-05

Department of Library and Information Science

M.Lib.I.Sc. Internal Examination 2nd Semester 2021-2022

BL- C 22 Information and communication Technology Application in LIS Practice

(2020 Pattern)

Time: - 3 Hours
Instructions:
All questions are compulsory
Figures to the right indicate full marks.

Max. Marks: 50
Date: - 18/05/2022

Q.1 Design a library website create hyperlinks for : 15

- About us
- Collection
- Services
- — CO-2

Q.2 Check the Plagiarism details and create report from your own assignment 10

— CO-3

Q.3 Search pdf articles on ' cloud computing ' and upload in your Mendele account 15

— CO-1

Q.4 Create table and insert the chart and show to the examiner CO-1 10

********** All the Best **********

Marks-List

Gokhale Education Society's
H. P. T. Arts & R. Y. K. Science College, Nashik- 5
Department of Library and Information Science

M.Lib.I.Sc. Internal Examination 2nd Semester 2021-2022
BL- C 22 Information and communication Technology Application in LIS Practice
(2020 Pattern)

Sr. No.	Seat No.	Roll No	Name of Student	Q.1 (15M)	Q.2 (10M)	Q.3 (15M)	Q.4 (10M)	Total (50M)
1	1501	1	Aher Dipali Vitthal	12	08	12	10	42
2	1502	2	Albad Sonali Raghunath	11	06	13	07	37
3	1503	3	Jadhav Amruta Bhagwan	10	07	10	07	34
4	1504	4	Malich Somanath Shankar	12	07	13	06	38
5	1505	5	Padmere Vaishali Baban	10	07	09	07	33
6	1506	6	Parihar Priya Ravindra	09	06	09	06	30
7	1507	7	Sonar Harshada Sanjay	12	06	12	07	37
8	1508	8	Sharma Devika Mahendra	12	08	10	08	38
9	1509	9	Shelke Samadhan Bhaskar	11	09	09	09	38

Prof. (Mrs) Medha R. Mangurkar
(Internal Examiner)

(Dr. Jayant M. Nandagaoli)
Head, Dept. of LIS

HPT Arts and RYK Science College Department of Library & Information Science Nashik

HEAD
Department of Library & Information Science
HPT Arts and RYK Science College, Nashik

CO Mapping Analysis

Sr. N	Seat No.	Roll No	Student's Name			Course Objectives/Outcomes				
						CO1	CO1	CO2	CO3	
						Q.3 (15)	Q.4 (10)	Q. 1 (15)	Q. 2 (10)	Total Marks (50)
1	1501	1	Aher	Dipali	Vitthal	12	10	12	8	#REF!
2	1502	2	Albad	Sonali	Raghuna	13	7	11	6	#REF!
3	1503	3	Jadhav	Amruta	Bhagwa	10	7	10	7	#REF!
4	1504	4	Malich	Somnath	Shankar	13	6	12	7	#REF!
5	1505	5	Padmere	Vaishali	Baban	9	7	10	7	#REF!
6	1506	6	Parihar	Priya	Ravindra	9	6	9	6	#REF!
7	1507	7	Sonar	Harshada	Sanjay	12	7	12	6	#REF!
8	1508	8	Sharma	Devika	Mahend	10	8	12	8	#REF!
9	1509	9	Shelake	Samadhan	Bhaskar	9	9	11	9	#REF!
					Total	97	67	99	64	
					Avg	10.7	7.4	11	7.11	

Criteria (60	9	9	9	9
Scale 3	3	3	3	3
Mapping	Fully Aligned	Fully Aligned	Fully Aligned	Fully Aligned

Action Taken/Suggestions

- Teacher can continue to use the same methodology
- Teacher can continue with skill-oriented approach in the classroom.

Subject Teacher

Head

HEAD
Department of Library & Information Science
HPT Arts and RYK Science College, Nashik

HPT Arts and RYK Science College Nashik

CO Mapping

Department: Journalism & Mass Communication

Subject: Audio and Video Journalism

MA (JMC): JMC 202: Audio and Video Journalism

Syllabus

Department of Mass Communication and Journalism)

F.Y. M.A. Journalism and Mass Communication (w.e.f. 2020 - 2021)

Course Content

JMC 202: Audio and Video Journalism

(Internal Assessment: 50 marks, End-of-semester exam: 50 marks)

Aims and Objectives:

1. To provide a comprehensive understanding of audio and video journalism principles, formats, and evolving practices.

2. To equip students with skills in writing, producing, and presenting engaging multimedia content.

3. To familiarize students with newsroom operations and the impact of technology on news production.

4. To foster critical thinking on the societal impact, ethics, and regulations of audio and video journalism.

Part 1: Audio Journalism Unit 1. Understanding audio: Types: conventional radio, internet radio, convergent news production; importance of sound and spoken word in audio journalism; using sound effectively in audio journalism; News Services Division of AIR; news on other types of radio; news podcasts; BBC, NPR etc. **Unit 2. Writing for the ear:** simple, conversational, clutter free writing; difference between writing to be read and writing to be heard; writing to suit the listeners' needs and consumption pattern; addressing linearity of presentation in radio scripts; **Unit 3. News-based programmes:** types of news presentations: duration, frequency, coverage, topic; structure of a news programme; selection of news; use of actuality, sound bytes and reports etc.; Other formats: interviews, features, documentaries, live commentaries, magazines, news reels etc.

Part 2: Video Journalism Unit 4. Understanding the medium: invention and development; strengths and weaknesses of the medium; Understanding TV News: news values, significance of timeliness, news as it happens; sources of news, types of news, news agencies; news priorities for TV, breaking news; MOJO. **Unit 5. Working of a news room:** various functionaries in a news room: reporters, copy editors, input editors, output editors, news producers; Convergent Newsroom; Backroom researchers, reference library or archives people, graphic artists. **Unit 6. TV writing style and news presentation:** words vs visuals, writing in 'aural' style, content of news, anchor script, voice over script, writing headlines, drafting of news scrolls; updating information; structure of a news bulletin: headlines, individual stories: telling a story through visuals, use of graphics, file shots, photos etc., compilation of a bulletin, live feed, anchor's responsibilities; Skills required of a news anchor; screen presence, presence of mind, interview skills etc. **Unit 7. TV Interview and TV Documentary:** Types of interviews: doorstep, vox-pop, eye-witness, during a news bulletin; TV interview as a separate programme format; indoor/outdoor; personality, opinion, informative interviews; Talk shows, discussions, debates etc.; Role and responsibility of the interviewer; TV Documentary: Formats, types: nature, institutional, event-based, personality etc., RECCE, planning, shooting script, editing, narration, background music, post-production; **Unit 8. Overview of News Television Industry and Its Impact on Society:** Major Indian and international news channels; regional language Indian channels: their role, importance and impact; local TV news operations; management of news channels, Organisational structure of the news room Doordarshan and its expansion; SITE and Kheda experiments; Entry and expansion of satellite TV; Laws governing TV broadcasting, future trends. Impact on society, Overview and introduction of all programme formats in fiction, non-fiction/news based/ entertainment, role and effect of TV on society, Television Ratings.

Question Paper

Gokhale Education Socitey's

H.P.T Arts and R.Y.K Science College, Nashik- 05

Department of Mass Communication and Journalism
Internal Examination: 2021

Subject: - JMC 202: Audio and Video Journalism Part: I, Sem: II

Marks: 50 Time: 2 Hours (9:30 to 10:30 AM)

Q.1 Detailed Answer Questions **[CO1]** **(10 Marks)**

(Attempt any one question out of two)

1. 1. Explain the structure and functioning of a convergent newsroom in audio and video journalism. Discuss the roles of key functionaries in detail.
2. Discuss the evolution of audio and video journalism from traditional practices to modern digital formats. Illustrate your answer with suitable examples.

Q.2 Short Notes **[CO2]** **(10 Marks)**

(Attempt any two out of four)

1. Writing for the ear: Key principles and techniques.

2. Role and responsibilities of a TV anchor.

3. Importance of sound and spoken word in audio journalism.

4. The role of scripting in producing engaging audio and video content.

Q.3 One-Sentence Answers **[CO3]** **(5 Marks)**

1. What is the significance of a teleprompter in video journalism?
2. Name one software commonly used for video editing in newsrooms.
3. Define the term "news rundown."
4. What is a podcast, and how is it used in journalism?
5. Mention one key difference between live broadcasting and recorded journalism.

Q.4 Match the Pairs **[CO2]** **(5 Marks)**

Column A	**Column B**
1) Vox Pop	i) A sound engineer's responsibility
2) B-roll	ii) On-the-spot public opinion
3) Anchor	iii) Background footage used in video journalism
4) Sound Mixing	iv) The main presenter of a news program
5) Chroma Key	v) Technique for replacing the background in videos

Q.5 News Production (Video/Audio) **[CO4]** **(20 Marks)**

1. Write a script for a 1-minute news bulletin for radio on a recent event.

2. Prepare a script and storyboard for a 2-minute video news segment covering a recent local issue.

Mark list

Gokhale Education Socitey's

H.P.T Arts and R.Y.K Science College, Nashik- 05

Department of Mass Communication and Journalism
Marks list of Internal Examination: Oct/Nov 2020-2021

Subject: - JMC 202: Audio and Video Journalism Part: I, Sem: II

Seat No.	Students	PRN Number	Q.1 (10M) [CO1]	Q.2 (10M) [CO2]	Q.3 (5M) [CO3]	Q.4 (5M) [CO2]	Q.5 (20M) [CO4]	Total 50
11123	ANIKET PATIL	2182000046	5	5	3	4	11	**28**
11124	VIKAS DARADE	2182000051	7	6	4	4	13	**34**
11125	SHUBHAM DHANDE	2182000034	8	6	3	5	36	**36**
11126	RAJRATNA GAJAHANS	2182000048	6	7	3	4	14	**34**
11127	NAYAN JADHAV	2182000042	7	6	4	5	10	**32**
11128	PRATIK JOSHI	2182000055	5	7	3	5	11	**31**
11129	SHUBHANGI KHELUKAR	2182000043	8	7	4	5	12	**36**
11130	VAIBHAV KUSHARE	2182000052	**AB**	**AB**	**AB**	**AB**	**AB**	**AB**
11131	ANUJA MARATHE	2182000038	8	8	4	5	14	**39**
11132	DEEPSHIKA MISHRA	2182000047	5	4	3	4	4	**20**
11133	BABAN NAGRE	2182000044	6	7	3	4	13	**33**
11134	DEEPAK PATALE	2182000045	**AB**	**AB**	**AB**	**AB**	**AB**	**AB**
11135	SUNIL PATIL	2182000054	3	2	3	4	1	**13**
11136	GAYATRI PORJE	2182000036	7	6	4	4	12	**33**
11137	PRASAD LAVATE	2182000035	6	6	4	4	12	**32**
11138	SACHIN BEDIS	2182000050	7	8	4	5	13	**37**
11139	ANKITA SALUNKHE	2182000040	8	7	4	5	11	**35**
11140	DIPALI SHINDE	2182000041	7	6	4	5	11	**33**
11141	SALONI SINGH	2182000049	6	5	3	4	11	**29**
11142	ANANDA THOMBRE	2182000053	**AB**	**AB**	**AB**	**AB**	**AB**	**AB**

CO Mapping Analysis

Sr. no	Seat No.	PRN Number	Students' Name			Courses Outcomes/Objectives			
				CO 1	CO 2	CO 3	C0 2	C0 4	
				Q.1 (10)	Q.2 (10)	Q.3 (5)	Q.4 (5)	Q.5 (20)	
1	11123	2182000046	ANIKET PATIL	5	5	3	4	11	
2	11124	2182000051	VIKAS DARADE	7	6	4	4	13	
3	11125	2182000034	SHUBHAM DHANDE	8	6	3	5	14	
4	11126	2182000048	RAJRATNA GAJAHANS	7	6	3	4	14	
5	11127	2182000042	NAYAN JADHAV	7	6	4	5	10	
6	11128	2182000055	PRATIK JOSHI	5	6	3	5	12	
7	11129	2182000043	SHUBHANGI KHELUKAR	8	7	4	5	12	
8	11130	2182000052	VAIBHAV KUSHARE	AB	AB	AB	AB	AB	
9	11131	2182000038	ANUJA MARATHE	8	8	4	5	14	
10	11132	2182000047	DEEPSHIKA MISHRA	5	4	3	4	4	
11	11133	2182000044	BABAN NAGRE	6	7	3	4	13	
12	11134	2182000045	DEEPAK PATALE	AB	AB	AB	AB	AB	
13	11135	2182000054	SUNIL PATIL	3	2	3	4	1	
14	11136	2182000036	GAYATRI PORJE	7	6	4	4	12	
15	11137	2182000035	PRASAD LAVATE	6	6	4	4	12	
16	11138	2182000050	SACHIN BEDIS	7	8	4	5	13	
17	11139	2182000040	ANKITA SALUNKHE	7	7	4	5	12	
18	1140	2182000041	DIPALI SHINDE	6	6	4	5	12	
19	1141	2182000049	SALONI SINGH	6	5	3	3	12	
20	1142	2182000053	ANANDA THOMBRE	AB	AB	AB	AB	AB	
			Total	108	101	60	75	191	
			Average	6.3529	5.941	3.529	4.411	11.235	
			Criteria (60%)	**13**	**13**	**17**	**17**	**13**	
			Scale 3	**1.95**	**1.95**	**2.55**	**2.55**	**1.95**	
				Mostly Aligned	**Mostly Aligned**	**Fully Aligned**	**Fully Aligned**	**Mostly Aligned**	

Action Taken/Suggestions

Students can be encouraged to participate in group discussions and teamwork.

Teachers should provide regular feedback and support.

Students can be motivated to practice real life situations.

Subject Teacher
(Sign)

Head of Dept.
(Sign)

College Stamp

तृतीय वर्ष कला (T. Y. B. A.)

नियमित अभ्यासक्रम

पहिले सत्र

विषयाचे नाव

वर्णनात्मक भाषाविज्ञान : भाग १ [DSE 2 C (3)+1]

अभ्यासक्रमाची उद्दिष्टे :

१ भाषा स्वरूप, वैशिष्ट्ये व कार्ये समजावून घेणे.
२ भाषा अभ्यासाची आवश्यकता स्पष्ट करणे.
३ भाषा अभ्यासाच्या शाखा आणि विविध पद्धतींचा थोडक्यात परिचय करून घेणे.
४ वागिन्द्रियाची रचना, कार्य आणि स्वननिर्मितीची प्रक्रिया समजावून घेणे.
५ स्वनविज्ञान, स्वनिमविचार आणि मराठीची स्वनिमव्यवस्था समजावून घेणे.

घटक	तपशील	श्रेयांक	तासिका
१	**भाषा : स्वरूप व संकल्पना** १ भाषा : स्वरूप, वैशिष्ट्ये व कार्ये २ संदेशन : मानव व मानवेतर संदेशन ३ भाषाभ्यासाच्या शाखा (ध्वनिविचार – व्याकरणविचार – अर्थविचार – शब्दसंग्रह - स्थूल परिचय) ४ भाषेच्या अभ्यासाचे महत्त्व व भाषाभ्यासाच्या पद्धती (ऐतिहासिक,वर्णनात्मक, सामाजिक, तुलनात्मक – स्थूल परिचय)	१	१५
२	स्वनविचार १ स्वनविज्ञान : स्वरूप व संकल्पना (उच्चारणकेंद्री - संचारणकेंद्री – श्रवणकेंद्री) २ वागिन्द्रीय : रचना व कार्य स्वनांची निर्मितिप्रक्रिया ३ स्वनांचे वर्गीकरण व वर्गीकरणाची तत्त्वे (उच्चारण स्थान, उच्चारण अवयव, प्रयत्न)	१	१५
३	स्वनिमविचार १ स्वन -स्वनिम-स्वनांतर (परस्पर संबंध व प्रकार) २ स्वनिमनिश्चितीची तत्त्वे ३ विनियोग संकल्पना (व्यवच्छेदक विनियोग- पूरक विनियोग - मुक्त परीवर्तन) मराठीची स्वनिमव्यवस्था (स्वरस्वनिम - अर्धस्वरस्वनिम - व्यंजन स्वनिम – खंडित व खंडाधिष्ठीत स्वनिम -बलाघात, सुरावली – नासिक्यरंजन - सीमासंधी)	१	१५
४	संशोधनपर प्रकल्प / क्षेत्रकार्य (घटक १, २ आणि ३)	१	१५

मराठी विभाग प्रमुख
ह.प्रा. ठा. [illegible] विज्ञान महाविद्यालय
नाशिक-५

गोखले एज्युकेशन सोसायटीचे,

एच.पी.टी. आर्टस् ॲण्ड आर.वाय.के. सायन्स कॉलेज, नाशिक ५.

अंतर्गत मूल्यमापन परीक्षा नोव्हें./ डिसें. २०२२

तृतीय वर्ष कला (TYBA) – सत्र पाचवे

विषय :- (DSE 2C) वर्णनात्मक भाषाविज्ञान : भाग १ (35022)

वेळ – ४५ मिनिटे | गुण २०

वार – गुरूवार | दिनांक: ०१/१२/२०२२

प्रश्न १. खालील प्रश्नांची दीर्घोत्तरी उत्तरे लिहा. (२ पैकी १) – CO1 **गुण १०**

१) भाषेचे स्वरूप, कार्ये व वैशिष्ट्ये विशद करा?

२) भाषाभ्यासाच्या विविध अभ्यासशाखांचा परिचय करून द्या?

प्रश्न २. खालील प्रश्नांची थोडक्यात उत्तरे लिहा. (४ पैकी २) – CO2 **गुण १०**

१) स्वन, स्वनिम, स्वनांतर संकल्पना स्पष्ट करा?

२) वागिन्द्रीयाची रचना व कार्ये लिहा?

३) मानव व मानवेत्तर यांची संदेशन प्रक्रिया स्पष्ट करा?

४) भाषाभ्यासाची आवश्यकता लिहा?

मराठी विभाग प्रमुख

Gokhale Education Society's

H. P. T. Arts & R. Y. K. Science College, Nashik-5.

Class - T.Y.B.A. 2022-2023

Sub - VARNATMAK BHASHAVIDYAN : BHAG 1 Sem - I & II

Sr. No.	Seat No.	Name of The Students	Sem - I 35022				Sem - II 36022			
			Int.	Ext.	Total	Grade	Int.	Ext.	Total	Grade
1	29763	AWACHAR PAYAL SANJAY	15	29	44	D	18	29	47	C
2	29764	BENDKOLI VENU KASHINATH	21	35	56	B+	18	28	46	C
3	29765	BOKE ADITYA SANJAY	21	35	56	B+	18	28	46	C
4	29766	JAGTAP VAISHNAVI PRAMOD	17	39	56	B+	14	31	45	C
5	29767	KAMBALE SUPRIYA DASHARATH	20	30	50	B	14	31	45	C
6	29768	PAWAR AISHWARYA JAGDISH	23	49	72	A	24	44	68	A
7	29769	SALAVE KARAN GANGARAM	15	20	35	F	16	29	45	C
8	29770	SHIRODE RUSHIKESH SHARAD	18	28	46	C	17	28	45	C
9	29771	SONAWANE JAYASHREE NIVRUTI	22	39	61	A	21	45	66	A
10	29772	SONAWANE KIRSHANA SUNIL	15	37	52	B	18	29	47	C
11	29773	SONUNE CHANDRAKANT BHUJANGRAO	15	37	52	B	18	29	47	C
12	29774	WAGHMARE MAYUR UDDHAV	13	AB	AB	F	AB	AB	AB	AB
13	29859	ADITI UDAY SHIRODE	21	36	57	B+	17	41	58	B+
14	29860	KAMBLE MANOJ DEVANAD	18	29	47	C	17	34	51	B+
15	29861	SANAS PRATIKSHA SACHIN	23	33	56	B+	20	41	61	A
16	29862	SHINDE SAMADHAN SUNIL	18	33	51	B	21	44	65	A
17		BARVE ROHOT SHASHIKANT	14	41	55	B+	18	0	18	F
18		DHAPSE GAUTAM UDDHAV	16	28	44	D	20	20	40	F
19		LOKHANDE LALIT ANIL	15	34	49	C	21	28	49	C

SEMISTER - 01	A+	A	B+	B	C	D	F	PASS-17	TOTAL-19
	0	2	6	4	3	2	2	FAIL-2	89.47%
SEMISTER - 02	A+	A	B+	B	C	D	F	PASS-16	TOTAL-19
	0	4	2	0	10	0	2	FAIL-2	84.21%

H.P.T. Arts and R.Y.K. Science College, Nashik

T.Y.B.A. Marathi

NOV.-DEC. 2022

SUB. - DSE 2C - VARNANATMAK BHASHAVIDNYAN CO Analysis

SR.NO.	NAME OF THE STUDENTS		Q1 CO1	Q2 CO2	HA CO3
1	JAGATAP VAISHANAVI PRAMOD		6	3	8
2	DESAI KAJAL VASANT		6	4	8
3	SARAS PRATIKSHA SACHIN		8	7	8
4	PAWAR AISHWARYA JAGDISH		8	7	9
5	BOKE ADITYA SANJAY		0	3	8
6	KAMBALE MANOJ DEVANAND		5	5	8
7	BENDKOLI VENU KASHINATH		8	4	9
8	SHIRODE ADITI UDAY		8	4	9
9	SONAWANE JAYSHREE NIVRUTTI		8	7	7
10	SALAVE KARAN GANGARAM		4	3	8
11	SONAVANE KRUSHANA SUNIL		6	3	7
12	SHIRODE RUSHIKESH SHARAD		7	3	8
13	SONUNE CHANDRAKNAT B.		5	3	8
14	AWACHAR PAYAL SANJAY		4	5	8
15	KAMBALE SUPRIYA DASHARATH		7	6	7
16	DHAPSE GAUTAM UDHHAV		6	4	8
17	SHINDE SAMADHAN SUNIL		6	4	8
Mapping	**Points on scale of 3**				
Not Aligned	0- 0.75	**60% Criterion**	**12**	**4**	**17**
Partially Aligned	0.75-1	**Total nos of Students**	**17**	**17**	**17**
Mostly Aligned	1.00 - 2.00	**Scale**	**2.12**	**0.71**	**3.00**
Fully Aligned	2.00 - 3.00	**CO Allignment**	**Fully Aligned**	**Not Aligned**	**Fully Aligned**

Action Taken/Suggestions

Subject Teacher

HOD

Three Year B.Sc. Degree Program in Mathematics
(Faculty of Science and Technology)
T. Y. B. Sc. (Mathematics)
Choice Based Credit System Syllabus

DSE-5B: MT 364: Partial Differential Equations (2 credits)

Course Objectives: The main goals of this course are to teach students how to form, solve, and apply partial differential equations to solve physical problems. Also, to introduce first and second order partial differential equations and their classifications and methods of finding solutions of these partial differential equations.

Course Learning Outcomes: The course will enable the students to:

i) Formulate, classify and transform partial differential equations into canonical form.

ii) Solve linear partial differential equations using various methods and apply these methods in solving some physical problems.

iii) Solve Laplace equations using various analytical methods demonstrate uniqueness of solutions of certain kinds of these equations.

Course Contents:

Unit 1: Introduction to Ordinary and Partial Differential Equations **[10 Lectures]**

1.1 Surfaces and Curves in Three Dimensions
1.2 Simultaneous Differential Equations of the First Order and the First Degree in Three Variables.
1.3 Methods of solution of $d/P = dy/Q = dz/R$
1.4 Pfaffian Differential Forms and Equations.
1.5 Solution of Pfaffian Differential Equations in Three Variables

Unit 2: Partial Differential Equations **[08 Lectures]**

2.1 Introduction to Partial Differential Equations
2.2 Origin of first order Partial Differential Equations
2.3 Linear Equations of First order equations
2.4 Integral surfaces passing through given curve

Unit 3: Second Order Partial Differential Equations **[10 lectures]**

3.1 The Origin of Second Order Partial Differential Equations.
3.2 Linear Partial Differential Equations with constant coefficients.
3.3 Methods of solving Linear Partial Differential Equations
3.3.1. Solution of reducible equations
3.3.2. Solution of irreducible equations with constant coefficients
3.3.3. Rules of finding complementary functions
3.3.4. Rule of finding particular integrals

Unit 4 : Classification of Partial Differential Equations **[08 lectures]**

4.1 Classification of second order partial differential equations, canonical forms
4.2 Solution of Laplace equations by separation variables methods
4.3 Solution of periodic differential equations by separation variables method
4.4 Solution of wave equation by separation variables method.

Text Books:

1. **Ian Sneddon, Element of Partial Differential Equations, McGraw-Hill Book Company, McGraw-Hill Book Company.**
   Unit-1: Chapter-1 : 1,2,3,5 , Unit-2: Chapter-2 :1,2,4,5, Unit-3: Chapter-3: 1,4,5
2. **J.N. Sharma, Kehar Singh, Partial Differential equations for Engineers and Scientists, second Edition, Narasa Publications.**
   Unit-4: Chapter No.3: 3.3, Chapter No.4: 4.3 , Chapter No.5: 5.5

Head
Department of Mathematics
H.P.T. Arts & R.Y.K. Science College,
Nashik-5

H.P.T. ARTS & R.Y.K. SCIENCE COLLEGE Nashik 05

GOKHALE EDUCATION SOCIETY's

H.P.T. Arts & R.Y.K. Science College, Nashik-422 005.

MATHEMATICS – IV

T.Y.B.Sc. Semester-VI, Internal Examination, April – 2023.

Time: 1 Hr. **Max Marks: 15**

Tuesday **364: PARTIAL DIFFERENTIAL EQUATIONS** **Date: 18/04/23.**

Q.1) *Attempt any **FIVE** of the following.* **(05)**

i) Define Surface in a space. Give an example of surface. CO1

ii) Find the integral curves of the set of equations $\frac{dx}{x(y-z)} = \frac{dy}{y(z-x)} = \frac{dz}{z(x-y)}$. CO1

iii) Verify the condition of integrability for $zdx + zdy + z(x + y + sinz)dz = 0$.

iv) Explain variable separable method for solving Pfaffian differential equation in three variables. And solve $2yzdx + zxdy - xy(1 + z)dz = 0$. CO1

v) Eliminate an arbitrary function F from the relation $F(x + y, x - \sqrt{z}) = 0$ and obtain the corresponding partial differential equation.

vi) Find the general solution of $xp + yq = z$.

vii) Verify that the equation $z = \sqrt{2x + a} + \sqrt{2y + b}$ is a complete integral of the partial differential equation $z = \frac{1}{p} + \frac{1}{q}$.

Q.2) *Attempt any **ONE** of the following.* **(05)**

i) A necessary and sufficient condition that there exists between two functions $u(x, y)$ & $v(x, y)$ a relation $F(u, v) = 0$ not involving x or y explicitly is that $\frac{\partial(u,v)}{\partial(x,y)} = 0$. CO2

ii) Prove that the general solution of the partial differential equation $Pp + Qq = R$ is $F(u, v) = 0$, where F is an arbitrary function and $u(x, y, z) = c_1$, $v(x, y, z) = c_2$ form a solution of the equations $\frac{dx}{P} = \frac{dy}{Q} = \frac{dz}{R}$. CO2

Q.3) *Attempt any **ONE** of the following.* **(05)**

i) Solve the homogeneous equation $(y + z)dx + (x + z)dy + (x + y)dz = 0$. CO3

ii) Find the integral surface of the equation $(x - y)y^2p + (y - x)x^2q = (x^2 + y^2)z$, which passes through the curve $xz = a^3$, $y = 0$. CO3

BEST LUCK.

Head
Department of Mathematics
H.P.T. Arts & R.Y.K. Science College,
Nashik-5

H.P.T. ARTS & R.Y.K. SCIENCE COLLEGE Nashik 05

Gokhale Education Society's

H.P.T. Arts & R.Y.K. Science College, Nashik.

T.Y.B.Sc. Mathematics(Sem. VI) Internal Test Marks AY 2022-23

Marklist

CO Mapping Analysis

MT-364: Partial Differential Equations

Roll No.	Name of the Student	CO1	CO2	CO3	
		Q1(5M)	Q2(5M)	Q3(5M)	Total(15)
1	Bhat Sakshi Tushar	5	5	5	15
2	Bokad Varsha Shankar	3	4	3	10
3	Dhakane Monali Sunil	3	5	2	10
4	Nadar Prathiba Dominic	2	5	4	11
5	Dubey Pooja Avdhesh	5	5	5	15
6	Gaikwad Harshal Ramdas	4	5	5	14
7	Jadhav Gaurav Daguji	2	4	3	9
8	Malode Dipeeka Navnath	5	5	5	15
9	Pagare Mayuri Shankar	3	5	3	11
10	Paithankar Pallavi Madhukar	3	5	1	9
11	Pandey Randhir Dinesh Kumar	5	5	4	14
12	Pawar Jayshri Sukalal	3	4	3	10
13	Shelar Kiran Lalchand	1	2	3	6
14	Singh Sejal Anandprakash	5	5	5	15
15	Singh Vaishali Gorakhnath	2	2	3	7
16	Tripathi Divya	5	3	5	13
17	Zafar Mohammed Adnan	1	2	3	6
	Total Marks	**57**	**71**	**62**	**190**
	Avarage Marks	**3.36**	**4.18**	**3.65**	**11.18**
	Total Students	**17**	**17**	**17**	**17**
	Criteria 60%	**12**	**14**	**15**	**14**
	Scale 3	**2.12**	**2.48**	**2.65**	**2.48**
	Mapping	**Fully aligned**	**Fully aligned**	**Fully aligned**	**Fully aligned**

Points on scale of 3	0-0.75	0.75-1.00	1.00-2.00	2.00-3.00
Mapping	Not aligned	Partially aligned	Mostly aligned	Fully aligned

H.P.T. ARTS & R.Y.K. SCIENCE COLLEGE Nashik 05

Head
Department of Mathematics
H.P.T. Arts & R.Y.K. Science College,
Nashik-5

a. Structure and role of m-RNA, t-RNA and Ribosomes in Translation
b. Role of Aminoacyl t-RNA synthetase in translation
c. Steps in translation: Initiation, elongation, translocation and termination of protein synthesis
d. Salient features of Eukaryotic translation

Credit II

Gene transfer and mapping techniques

5. Gene transfer by Transformation

a. Discovery of Transformation
b. Natural transformation Systems-
Streptococcus pneumoniae and *Haemophilus influenzae*.
c. Factors affecting transformation
i. Competence development
ii. Size of DNA
iii. Concentration of DNA

6. Gene transfer by Conjugation

a. Discovery of Conjugation,
b. Properties of F plasmid, F+, F-, Hfr and F′ strains
c. Process of conjugation between F+ and F- , Hfr and F-, F ’and F-

7. Gene transfer by Transduction

a. Discovery of Transduction
b. Generalized transduction mediated by P22
c. Specialized transduction mediated by lambda phage
4

8. An introduction to Gene mapping

a. Gene linkage and concept of genetic recombination
b. Recombination mapping: Map unit, recombination frequency
c. Mapping of genes by co-transformation
d. Mapping of genes by co-transduction
e. Mapping by interrupted mating experiment
f. Numerical problems based on co-transformation, cotransduction and interrupted mating

QUESTION PAPER

Savitribai Phule Pune University

H.P.T Arts and R.Y.K.Science College, Nashik

Dept.of Microbiology

T.Y.B.Sc. Paper IV: Genetics

Internal Test

Sem I- 2023-24

Total Mks.-15 **Time-30 Minutes**

Q.1 Answer in one line - Any 5 (CO1) **5 mks**

a. Which two strains of *S.pneumoniae* were used in Griffith's experiment and what were their properties.

b.Enlist any two properties of F-factor involved in bacterial conjugation ?

c. Which two types of transduction are found in bacteria? Which types of phages mediate them?

d. Who discovered conjugation in bacteria?

e.What is Lambda dg?

f. What are blebs involved in conjugation in *H.influenzae*?

Q.2 Write short notes on - Any 2 (CO2) **5 mks**

a. Eclipse period in transformation

b. Result of cross between Hfr and F⁻ strains of *E.coli*

c. Site specific recombination by Lambda phage.

Q.3Attempt the following- Any 1 (CO3) **5mks**

a. With suitable diagram explain the steps in transformation in Pneumococci

b. With suitable diagram explain the discovery of transduction in *Salmonella typhimurium*.

Department of Microbiology

Semester V

T.Y.B.Sc -Semester V

DSEC -MB 354: Genetics

[2 Credits; 36 Lectures]
[1 credit=15hrs x 60 mins = 900mins/50mins=18 lectures]

Course Outcomes

1. To exhibit a knowledge base in Genetics and Molecular Biology
2. To understand the central dogma of Molecular Biology
3. To construct genetic map of bacteria and fungi
4. To get introduced to concept of recombination and bacteriophage Genetics
5. To understand the concept cloning in bacteria
6. To demonstrate the knowledge of common and advanced laboratory practices in Molecular Biology

Syllabus

Credit I
Topic 1:DNA Replication and Gene Expression

1. Process of prokaryotic DNA replication
a. Single replicon
b. Bidirectional movement of replication fork
c. Ori C
d. Pre-priming and Priming reaction.
e. DNA polymerases, DNA synthesis of leading, lagging strand Okazaki fragments.
f. Termination- Ter sequence, Tus protein

2. Prokaryotic and Eukaryotic Transcription
i. Transcription in Prokaryotes
a. Structure of promoter
b. Structure and function of RNA polymerase
c. Steps of transcription: Initiation, Elongation and termination
ii. Transcription in eukaryotes with respect to protein coding Gene:
a. Promoter, promoter proximal elements and enhancers
b. Transcription regulatory proteins
c. RNA polymerases
d. Steps in transcription: Initiation, Elongation, Termination
e. Post transcriptional modifications: 5' capping, 3' polyadenylation and introduction to RNA splicing

3. Regulation of transcription:
Concept and components of operon:
Lac operon: Inducible operon

4. Translation in prokaryotes and eukaryotes

H.P.T Arts and R.Y.K.Science College, Nashik

Dept.of Microbiology

T.Y.B.Sc. Paper IV: Genetics

Internal Test

Sem I- 2023-24

Marklist

Sr. No.	Seat Nos.	Name	Q.1	Q.2	Q.3	out of 15
1	9746	Bhalerao Prajkta	5	4	3	12
3	9747	Charose Hrutuja	4	5	3	12
2	9748	Chauk Prachiti	3	4	3	10
4	9749	Dandgaval Arya	5	4	2	11
5	9750	Gangurde Diksha	5	4	4	13
6	9751	Gangurde Rucha	4	5	4	13
7	9752	Gosavi Prarthana	3	4	3	10
8	9753	Kanhe Sneha	5	4	3	12
10	9754	Magare Ashwini	4	4	3	11
9	9755	Nagarale Jaai	4	3	4	11
11	9756	Shetty Megha	5	5	4	14

L.P.Pathak
(Dr. L.P. Pathak)
Subject teacher

L.P.Pathak
(Dr. L.P. Pathak)
Head
Dept. of Microbiology

Head
Department of Microbiology
H.P.T. Arts & R.Y.K. Sci. College
NASHIK-422 005

Sr. No.	Seat Nos.	Name	CO1 Q.1(5)	CO3 Q.2(5)	CO4 Q.3(5)	out of 15
1	9746	Bhalerao Prajkta	5	4	3	12
3	9747	Charose Hrutuja	4	5	3	12
2	9748	Chauk Prachiti	3	4	3	10
4	9749	Dandgaval Arya	5	4	2	11
5	9750	Gangurde Diksha	5	4	4	13
6	9751	Gangurde Rucha	4	5	4	13
7	9752	Gosavi Prarthana	3	4	3	10
8	9753	Kanhe Sneha	5	4	3	12
10	9754	Magare Ashwini	4	4	3	11
9	9755	Nagarale Jaai	4	3	4	11
11	9756	Shetty Megha	5	5	4	14
		Total	47	46	36	
		Average	4.27	4.18	3.27	
		Criteria 60%	11	11	10	
		Scale 3	3	3	2.7	
			Fully alligned	Fully alligned	Fully alligned	

Action Taken: The teacher can continue teaching this paper with the same methodology.

L.P.Pathak
(Dr. L.P. Pathak)
Subject Teacher

L.P.Pathak
(Dr. R.P. Pathak)
Head of the Department

Head
Department of Microbiology
H.P.T. Arts & R.Y.K. Sci. College
NASHIK-422 005

H.P.T. ARTS & R.Y.K. SCIENCE COLLEGE NASHIK 422 005

College Stamp

M.Sc. (Physics) (Sem-II)
PHY 551 MJ : Solid State Physics

Lectures: 60 **(Credits-04)**

A) Course Objectives:

This course will investigate the structural and physical properties of materials by developing better understanding of crystal structure with particular emphasis on studying the electrical and magnetic behavior of solids. The course shows how various types of phenomena (resistivity, magnetism, superconductivity) are related. The main objectives of the course are to increase the students' understanding and knowledge of solid state physics and to improve their problem solving ability, including the design of experiments which examine principles in condensed matter physics.

B) Learning Course Outcomes (CO) :

Upon completion of the course, the student will be able to,

1. Understand characteristic physical properties of different categories of solid materials, with an emphasis on the crystalline state.
2. How a wide spectrum of theoretical approaches to model the mechanical, thermal and electrical properties of solid materials.
3. Do quantitative calculations based on established theoretical models to describe the properties of materials.
4. Use of Fourier Transform methods, including reciprocal space, as an analytical tools to perform and analyze basic diffraction experiments to gain information about atomic scale structures.
5. Analyze solid-state problems using mathematical and numerical methods.
6. Account for the role of solid state physics for technology and society as well as links between solid state physics and other main branches of physics.

C) Instructional design:

1) Lecture method
2) Tutorial method
3) Seminars

D) Evaluation Strategies :

1) Descriptive written and/or subjective Multiple Choice Question based examination
2) Assignments/Tutorial sessions
3) Seminars/Orals//Viva/Classroom evaluation of students

E) Course Contents :

Module-1	Crystal Structure and Band Theory of Solids	Lectures = 15
	Introduction to Crystal structures, Reciprocal Space & Bragg's Diffraction, Brillouin Zone, Atomic form factor (scattering factor), Geometrical structure factor, Structure factor calculations for SC, BCC, FCC structure, Nearly free electron model, Motion of electron in 1-D according to band theory, Bloch theorem, Kronig-Penney model, Variation of Energy, Velocity and effective mass of electron,Tight binding approximation, Band structure, Numerical	**Credit-1**

Module-2	Magnetism	Lectures = 15
	Theory of diamagnetism and magnetic susceptibility using classical approach, Langevin theory of Paramagnetism, Quantum theory of Paramagnetism, Paramagnetic susceptibility of conduction electron, Hund's Rule and Magnetic properties of rare earth ions & iron group ions with graphical representation, Crystal field splitting, quenching of orbital angular momentum, Wiess molecular theory, Curie point, ferromagnetic domains, Anisotropy energy, Bloch wall. Antiferromagnetism and Ferrimagnetism, Numerical	Credit-1
Module-3	**Dielectric & Ferroelectrics**	**Lectures = 15**
	Electric Polarization, Macroscopic and local electric field, Dielectric Constant and Polarizability, Classical Theory of Electronic Polarizability, Debye Relaxation, Clausius – Mossotti relation, Ferroelectricity, structural phase transitions, ferroelectric crystals, Dielectric behaviour in $BaTiO_3$, Piezoelectricity, Numerical	Credit-1
Module-4	**Superconductivity**	**Lectures = 15**
	Properties of Superconductors: Meissner effect, Heat capacity, Energy gap, Isotope effect; Type I and II superconductors; Superconductor as perfect diamagnet, Thermodynamics of superconductivity; London equation and London penetration depth; BCS theory: Electgron-Electron interaction via Phonon, Cooper Pair, Bose-Einstein Condensate, High temperature superconductor e.g. $YBa_2Cu_3O_7$. Qualitative discussion of Josephson superconductor tunnelling, Numerical.	Credit-1

G) REFERENCES:

1. Introduction to Solid State Physics by C. Kittel, 8th edn, John Wiley & Sons. Inc., New York (1976).
2. Solid State Physics by S. O. Pillai. New Age International Publication.-2002
3. Solid State Physics by A. J. Dekker, MacMillan India Ltd. (1986).
4. Solid State Physics by N. W. Ashcroft and N. D. Mermin, HRW International edn. (1976).
5. Fundamentals of Solid State Physics, J. R. Christman, (John Wiley and Sons)
6. Solid State Physics, H. Ibach and H. Luth, (Springer-Verlag)
7. Solid State Physics, J.J. Quinn and K-Soo Yi (Springer)
8. Dielectrics in Electric Fields- Gorur Govinda Raju (CRC Press)
9. Introductory Solid State Physics, H. P. Myers, (Viva Books Pvt. Ltd.)
10. Elementary Solid State Physics by Ali Omar (Addison-Wesley Publishing Company)
11. Solid State Physics by M. A. Wahab (Narosa Publishing House)

HPT Arts and RYK Science College
MSc. - II, Solid State Physics
Sem – I, Assignment – I 2022-23

Date – 18/09/2022 Marks – 30

I. Answer the following. (5×2=10) CO-6

1. Calculate the critical current and current density for a wire of a lead having a diameter of 1 mm at 4.2 K. The critical temperature for lead is 7.18 K and $H = 6.5 \times 10^4\ Am^{-1}$.
2. What are the significance of London equations?
3. Derive Clausius-Mossotti relation.
4. Why critical magnetic field in a superconductor decrease with temperature? Show mathematically with a graph.
5. Why there is a discontinuity in the specific heat curve at the critical temperature of the superconductor?

II. Answer the following. (4×5=20) CO-5

1. Calculate the value of the London penetration depth at 0K for lead whose density is 11.3×10^3 kg/m^3 and atomic weight is 207.19 amu. Its T_c is 7.22K, calculate the increase in λ at 3.61K from its value at 0K.
2. How can you say that superconductor is perfectly diamagnetic? Explain with expression.
3. Show that Magnetic flux in a superconducting ring is quantized in nature.
4. The London penetration depth for Pb at 3K and 7.1K are respectively 39.6 nm and 173 nm respectively. Calculate its transition temperature as well as the penetration depth at 0K.

HPT Arts and RYK Science College
MSc. - II Solid State Physics
Sem – II, Internal – I 2022--23
Date – 21/09/2022 Time –1.5 Hr Marks – 30

(I) Solve any four questions. CO1 & CO2. **5×4 =20**

1. (a) Show for a simple square lattice (two dimensions) that the kinetic energy of a free electron at a corner of the first Brillouin zone is higher than that of an electron at the midpoint of a side face of the zone by a factor of 2.
   (b) What is the corresponding factor for a simple cubic lattice (three dimensions)?
2. An electron has energy dispersion near the top of a band at k=0, that is given as
   $\varepsilon(k) = \varepsilon_0 - \frac{\hbar^2 k^2}{2m^*}$
   Find the equation of motion of the electron that has energy near top of the band and show that it behaves like a positively charged particle.
3. In an orthorhombic crystal, a lattice plane cuts intercepts in the ratio 1:2:3 along a,b and c axes. Find the miller indices of the plane. Calculate the interplanar spacing.
4. Explain the basic assumption of the Bloch theorem. How it is different from the assumption of Kronig Penny model?
5. What are the conclusion of Kronig Penny model for energy band structure of solid?
6. Obtain an expression for geometrical structure factor of FCC and also the condition of absence of the planes.

(II) Solve the following. CO3 & CO4.

1. Show that if in the potential model used in connection with the Kronig-Penny calculation. Vo is allowed to become infinetly large and to approach zero, such that the product $P = -\frac{\beta^2 ab}{2}$ remains fixed then allowed energy values are given by the solution of equation $P\frac{\sin \alpha a}{\alpha a} + \cos \alpha a = \cos ka.$
   Also show that this leads to allowed and forbidden energy bands. Explain the formation of energy bands in solids. (8)
   OR
   Kronig-Penny model is given by the periodic potential with form
   $V(x) = +V_o \qquad -b < x < 0$
   $V(x) = 0 \qquad 0 < x < a$
   By solving the Schrodinger's equation and applying the continuous conditions to the boundary, the energy band calculation expression is obtained as
   $$\frac{\alpha^2 + \beta^2}{2\alpha\beta}\sinh \beta b \sin \alpha a + \cosh \beta b \cos \alpha a = \cos k(a+b)$$
   $with\ \alpha^2 = \frac{2mE}{\hbar^2}\ and\ \beta^2 = \frac{2m(Vo-E)}{\hbar^2}$ and k is Bloch wavenumber.
   In the state $b \to 0$, $V_o = 10000E$ and $\frac{\beta^2 ab}{2} = 10.$ Determine by approximation of the form of the simpler energy band calculation expression. Using this result determine the approximate value of the lowest energy in the first energy band.

2. Consider *X*-ray diffraction from a crystal with a face-centered-cubic (*fcc*) lattice. Write down three lattice plane for which there is NO diffraction peak is observed. (2)

HPT Arts and RYK Science College

Department of Physics

MSc. - II Solid State Physics 2022--23 SEM-I

Internal assesment

Roll No	Student's Name	Q1 (20)	Q2 (10)	Assignment (30)	Total Marks (30)
1	AHIRE RUTUJA RAVINDRA	14	8	24	23
2	BORASTE MAYURI VIJAY	16	8	27	26
3	DIWATE PRANALI VITTHAL	10	8	20	19
4	GHARATE GAYATRI ANIL	16	8	26	25
5	GUJRATHI VAISHNAVI RAJENDRA	13	6	22	21
6	MORE ROHIT EKNATH	15	7	26	24
7	NIKAM SALONI BHARAT	10	6	18	17
8	SAPAKALE ROHINI NAMDEV	11	5	22	19
9	SHAIKH ADIBA FATEMA MAJEED	15	7	23	23
10	SHAIKH IMROZ FATEMA ABDUL SATTAR	10	5	20	18
11	SHAIKH MUBASHSHERAH MOHAMMAD	11	5	18	17
12	SHAIKH MUSKAN NASIRUDDIN	14	6	22	21
13	SHEVKAR VAISHANAVI BABASAHEB	14	6	22	21
14	SONJE PRIYA PRAVIN	15	8	26	25
15	SURYAWANSHI PRIYANKA DEVIDAS	18	10	28	28
16	SURYAWANSHI RASIKA SOPAN	15	5	18	19
17	THORAT MAYURI SUBHASH	11	5	15	16
18	WALKE PRATIBHA NARAYAN	14	5	23	21
19	YELMAME KALYANI RAMESHWAR	8	6	18	16

Head of the
Physics Department,
H.P.T./R.Y.K. Sc. College, Nasik-5

HPT Arts and RYK Science College

Department of Physics

Course Outcome Mapping Analysis

MSc. - II Solid State Physics 2022--23

Course Objectives/Outcomes

Sr. No	Roll No	Student's Name	CO1 & CO2	CO3 & CO4	CO5&CO6	Total
			Q1 (20)	Q2 (10)	Assignment (30)	Marks (50)
1	1	AHIRE RUTUJA RAVINDRA	14	8	24	38
2	2	BORASTE MAYURI VIJAY	16	8	27	51
3	3	DIWATE PRANALI VITTHAL	10	8	20	38
4	4	GHARATE GAYATRI ANIL	16	8	26	50
5	5	GUJRATHI VAISHNAVI RAJENDRA	13	6	22	41
6	6	MORE ROHIT EKNATH	15	7	26	34
7	7	NIKAM SALONI BHARAT	10	6	18	38
8	8	SAPAKALE ROHINI NAMDEV	11	5	22	38
9	9	SHAIKH ADIBA FATEMA MAJEED	15	7	23	45
10	10	SHAIKH IMROZ FATEMA ABDUL SATTAR	10	5	20	35
11	11	SHAIKH MUBASHSHERAH MOHAMMAD	11	5	18	34
12	12	SHAIKH MUSKAN NASIRUDDIN	14	6	22	42
13	13	SHEVKAR VAISHANAVI BABASAHEB	14	6	22	42
14	14	SONJE PRIYA PRAVIN	15	8	26	49
15	15	SURYAWANSHI PRIYANKA DEVIDAS	18	10	28	56
16	16	SURYAWANSHI RASIKA SOPAN	15	5	18	38
17	17	THORAT MAYURI SUBHASH	11	5	15	31
18	18	WALKE PRATIBHA NARAYAN	14	5	23	42
19	19	YELMAME KALYANI RAMESHWAR	8	6	18	32
		Total	250	124	418	
		Avg	13.157895	6.5263158	9.5	

Partially Aligned	0.75-1	Criteria (60%)	12	13	18
Mostly Aligned	1.00 - 2.00				
Fully Aligned	2.00 - 3.00	Scale 3	1.89	2	2.84
		Mapping	Mostly Aligned	Mostly Aligned	Fully Aligned

Head of the
Physics Department,
H.P.T./R.Y.K. Sc. College, Nasik-5

SAVITRIBAI PHULE PUNE UNIVERSITY

(Formerly University of Pune)

T.Y.B.A. Political Science & Public Administration Syllabus

(CREDIT & SEMESTER SYSTEM)

Revised Syllabus will be implemented with effect from the academic year 2021-2022

Savitribai Phule Pune University

T.Y.B.A. Political Science

(CBCS pattern to be implemented from 2021-2022)

DISCIPLINE SPECIFIC ELECTIVE COURSE

PUBLIC ADMINISTRATION

Objectives: This paper is an introductory course in Public Administration. The essence of Public Administration lies in its effectiveness in translating the governing philosophy into programmes, policies and activities and making it a part of community living. The paper covers personnel public administration in its historical context thereby proceeding to highlight several of its categories, which have developed administrative salience and capabilities to deal with the process of change. The recent developments and particularly the emergence of New Public Administrations are incorporated within the larger paradigm of democratic legitimacy. The importance of legislative and judicial control over administration is also highlighted

CO1: Understand the Concept of Governance

CO2: Impart Knowledge about Bureaucracy.

CO3:Introduction about various Methods of Recruitment & Training.

CO4: Generate interest in Budgetary process in India.

SEMESTER-V

DSE 1 C (3)+1

	PERIOD
Unit 1: **Public Administration** a) Meaning b) Nature c) Scope and Significance	12
Unit 2: **New Public Administration** a) Evolution b) Salient Features c) Goals	12
Unit 3: Approaches to Public Administration a) Traditional Approach b) Behavioral Approach c) System Approach	12

Unit 4: Governance 12

a) Idea of Good Governance

b) E-Governance

c) Public Private Partnership

SEMESTER-VI

DSE 1 D (3)+1

Unit 1: Bureaucracy 12

a) Meaning and Definitions

b) Administrative Reforms

Unit 2: Personnel Administration 12

a) Recruitment

b) Training

c) Promotion

Unit 3: Budgeting 12

a) Meaning and types and Principles of sound Budget

b) Budgetary Process in India

c) Gender Budgeting

Unit 4: Accountability and Control 12

a) Administrative Accountability

b) Legislative Control

c) Judicial Control

Readings:

1. Avasthi Amreshwar and Maheshwari Shriram, 1982, *Public Administration*, Agra, Lakshmi Narran Aggrawal.
2. वेनके सुवर्णा ,२०१५ ,*लोकप्रशासन*, जळगाव, प्रशांत पब्लिकेशन्स.
3. Bhagwan Vishnu and Bhushan Vidya, 2007, *Public Administration*, New Delhi, S Chand and Company Ltd.

Gokhale Education Society's

H.P.T. Arts & R.Y.K. Science College, Nasik.

TYBA MID – SEMESTER EXAMINATION (Sem-VI): May-2023

SUBJECT: Political Science (DSE-1D/S3)

Paper: Public Administration

Time: 45 Min. **Marks: 20**

Q.1 Answer the following question in 250-300 Words. (Any One) CO1 (10)

1) Write an essay on bureaucracy.
नोकरशाहीवर निबंध लिहा.

2) What is recruitment? Explain different types of recruitment.
भरती म्हणजे काय? भरतीचे प्रकार स्पष्ट करा

Q.2 Write Short Notes in 100-150 Words each. (Any Two) CO2 (10)

1) Administrative reforms प्रशासकीय सुधारणा

2) Training प्रशिक्षण

3) Promotion बढती

4) Political neutrality of civil servants सनदी सेवकांची राजकीय तटस्थता

G.E. Soicty's

H.P.T. Arts and R.Y.K. Science College, Nashik-05

Department of Political Science

2022-2023

DSC/S3- Public Administration Marklist out of 30

Sr. No	Roll No	Name of the Student	Written Test (Out of 20)	Home Assignemnt (Out of 10)	Total
1	5	Ahire Hemangi Samadhan	11	8	19
2	8	Amolik Vaibhav Sudhakar	12	7	19
3	9	Avhad Rutuja Shivaji	13	7	20
4	13	Badad Vaibhav Narayan	12	7	19
5	16	Bagul Kuldeep Naresh	6	7	13
6	17	Bagul Mansi Sanjay	16	8	24
7	24	Bhadane Dhiraj Ashok	13	7	20
8	39	Chavhan Tejswini B	14	8	22
9	54	Gadre Adwait Chandrshekhar	12	8	20
10	56	Gaikwad Nikita Sanjay	10	7	17
11	63	Gangurde Amit	14	7	21
12	67	Gangurde Tanmay Hemant	12	7	19
13	69	Elio Suresh Gavit	11	7	18
14	79	Gundalwar Tanvi Pravin	17	8	25
15	81	Harad Vinod Madhav	14	8	22
16	82	Hatkar Sainath	6	7	13
17	89	Jadhav Mayuresh Sham	10	7	17
18	90	Jadhav Nikita Keshav	9	7	16
19	95	Jadhav Tejas Yashwant	6	7	13
20	96	Jadhav Tushar Datta	11	8	19
21	100	Jaiswal Ragini P	12	8	20
22	102	Joshi Akshaya Prakash	15	7	22
23	105	Joshi Shreedhar S	16	8	24
24	131	Korade Darshana Nana	9	7	16
25	133	Kaul Ananya	12	8	20
26	137	Kulkarni Mrinmayee	14	6	20
27	145	Om Anil Mandlik	11	7	18
28	151	More Gaurav Madhukar	16	8	24
29	152	More Gayatri Nivrutti	15	8	23

G.E. Soicty's

H.P.T. Arts and R.Y.K. Science College, Nashik-05

Department of Political Science

2022-2023

DSC/S3- Public Administration Marklist out of 30

Sr. No	Roll No	Name of the Student	Written Test (Out of 20)	Home Assignemnt (Out of 10)	Total
30	157	Najan Abhishekh Kisan	8	8	16
31	169	Patekar Harshal Sundar	11	7	18
32	176	Pawar Chetan Umaji	13	7	20
33	187	Rajupurohit Bhavya R.	16	8	24
34	189	Rampurwala Zahabiyah	14	7	21
35	196	Sali Khushboo Mahendra	16	7	23
36	198	Saluke Nupur Dilip	15	7	22
37	206	Sapate Sandeep Nivrutti	14	8	22
38	208	Satpue Ashsish Shirdas	14	7	21
39	209	Savkhedkar Samarath R	12	7	19
40	218	Shinde Ankita Sanjay	16	7	23
41	223	Shirsath Pravin Milind	10	7	17
42	225	Shirsath Kunal Vikas	14	7	21
43	236	Tabale Kuldeep Bhagwan	15	7	22
44	249	Ubale Sumedh Y	13	7	20

Subject Teacher

(H.A.Khairnar)

HOD

HEAD
DEPARTMENT OF POLITICAL SCIENCE
H.P.T. Arts & R.Y.K Sc. College, Nashik-5

G.E. Society's

H.P.T. Arts and R.Y.K. Science College, Nashik-05

Department of Political Science

CO Analysis: DSC/S3- Public Administration

Sr. No	Roll No	Name of the Student	Q1	Q2	Home Assignemnt	Total
1	5	Ahire Hemangi Samadhan	8	3	8	19
2	8	Amolik Vaibhav Sudhakar	6	6	7	19
3	9	Avhad Rutuja Shivaji	6	7	7	20
4	13	Badad Vaibhav Narayan	6	6	7	19
5	16	Bagul Kuldeep Naresh	6	0	7	13
6	17	Bagul Mansi Sanjay	8	8	8	24
7	24	Bhadane Dhiraj Ashok	7	6	7	20
8	39	Chavhan Tejswini B	8	6	8	22
9	54	Gadre Adwait Chandrshekhar	6	6	8	20
10	56	Gaikwad Nikita Sanjay	7	3	7	17
11	63	Gangurde Amit	8	6	7	21
12	67	Gangurde Tanmay Hemant	6	6	7	19
13	69	Elio Suresh Gavit	6	5	7	18
14	79	Gundalwar Tanvi Pravin	8	9	8	25
15	81	Harad Vinod Madhav	8	6	8	22
16	82	Hatkar Sainath	3	3	7	13
17	89	Jadhav Mayuresh Sham	6	4	7	17
18	90	Jadhav Nikita Keshav	6	3	7	16
19	95	Jadhav Tejas Yashwant	6	0	7	13
20	96	Jadhav Tushar Datta	8	3	8	19
21	100	Jaiswal Ragini P	6	6	8	20
22	102	Joshi Akshaya Prakash	8	7	7	22
23	105	Joshi Shreedhar S	8	8	8	24
24	131	Korade Darshana Nana	6	3	7	16
25	133	Kaul Ananya	6	6	8	20
26	137	Kulkarni Mrinmayee	7	7	6	20
27	145	Om Anil Mandlik	8	3	7	18
28	151	More Gaurav Madhukar	8	8	8	24
29	152	More Gayatri Nivrutti	8	7	8	23
30	157	Najan Abhishekh Kisan	8	0	8	16

G.E. Soicty's

H.P.T. Arts and R.Y.K. Science College, Nashik-05

Department of Political Science

CO Analysis: DSC/S3- Public Administration

Sr. No	Roll No	Name of the Student	Q1	Q2	Home Assignemnt	Total
31	169	Patekar Harshal Sundar	8	3	7	18
32	176	Pawar Chetan Umaji	7	6	7	20
33	187	Rajupurohit Bhavya R.	8	8	8	24
34	189	Rampurwala Zahabiyah	8	6	7	21
35	196	Sali Khushboo Mahendra	8	8	7	23
36	198	Saluke Nupur Dilip	7	8	7	22
37	206	Sapate Sandeep Nivrutti	8	6	8	22
38	208	Satpue Ashsish Shirdas	8	6	7	21
39	209	Savkhedkar Samarath R	6	6	7	19
40	218	Shinde Ankita Sanjay	8	8	7	23
41	223	Shirsath Pravin Milind	6	4	7	17
42	225	Shirsath Kunal Vikas	8	6	7	21
43	236	Tabale Kuldeep Bhagwan	8	7	7	22
44	249	Ubale Sumedh Y	7	6	7	20
		Average	7.07	5.43	7.32	19.82
		Total Nos of Students	44	44	44	44
		Criterion 60%	43	34	44	
		Scale	**2.93**	**2.32**	**3.00**	
		Alignment	**Fully Aligned**	**Fully Aligned**	**Fully Aligned**	

Mapping	Points on scale of 3
Not Aligned	0- 0.75
Partially Aligned	0.75-1
Mostly Aligned	1.00 - 2.00
Fully Aligned	2.00 - 3.00

Action Taken/ Suggestion

1. Current teaching methods to be continued
2. Department will Arrange Field Visits to political and administrtive Institutions

Subject Teacher H. A. Khairnar

HOD

HEAD
DEPARTMENT OF POLITICAL SCIENCE
H.P.T. Arts & R.Y.K. Sc. College, Nashik-5

SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE

(Formerly University of Pune)

M.A. Syllabus – Semester III and IV (Credit and Semester System)

Clinical Psychology

(To be implemented from the Academic Year, 2020-2021)

Core Paper-1: COUNSELLING PROCESS AND SKILLS

==========

At the conclusion of this course, students will be able to:

- understand the nature of the counselling process
- know the groundwork for understanding the use of basic and specialized counselling skills
- engage with different models of counselling skills

Course Contents:

Unit 1. Counselling: Nature and goals

1.1. Defining counselling, stages of counselling process, role of counsellors

1.2. Approaches to counselling and helping, the helping relationship, the helping process

1.3. Development of counsellor –counselee relationship, counselling goal setting process

1.4. Counselling in India

Unit 2. Basic Counselling Skills

2.1. Building relationship, core conditions, in-depth exploration

2.2. Nature and importance generic skills of Counselling, Micro and macro skills of Counselling

2.3. Inside and outside skills of counselling, Self-monitoring skills as a counsellor

2.4. An Indigenous Model of Counselling

Unit 3. Specific Counselling Skills

3.1. Paraphrasing and reflecting feelings, asking questions, self-disclosing, facilitating problem solving

3.2. Interviewing skills, listening, asking questions, monitoring

3.3. Training clients in relaxation

3.4. Improving client's self-talk and self-perceptions, terminating helping

Unit 4. Models of Counselling Skills

4.1. Nature and importance of counselling skills and working alliance

4.2. Rogers model of counselling skills, Carkhuff model of counselling skills, IPR model of counselling training

4.3. Indian models of Counselling: the role of detachment and self-surrender

4.4. Modern trends in counselling

H. P. T. ARTS & R. Y. K. SC. COLLEGE ESTD 1921 NASHIK-5

HEAD
DEPARTMENT OF PSYCHOLOGY
H.P.T. Arts & R.Y.K. Sc. College, Nashik-5

Gokhale Education Society's

HPT Arts & RYK Science College, Nasik-5.

Department of Psychology

MA- II

Sem- III - First Class Test- 2022

EP. 301- Counselling -Process and Skills

Time- 9.30am – 10.00am **Date- 6-10-2022**

Marks- 10

Q 1.

A. Explain the Helping Process and Goal Setting in Counselling. (CO-1)

OR

B. Define the concept of Counselling. Explain the stages of counselling process in detail. (CO-1)

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DEPARTMENT OF PSYCHOLOGY
H.P.T Arts & R.Y.K. Sc. College, Nashik-5

H. P. T. ARTS & R. Y. K. SC. COLLEGE ESTD 1924 NASHIK 5

Gokhale Education Society's

HPT Arts & RYK Science College, Nasik-5.

Department of Psychology

MA- II

Sem- III - First Internal Exam- 2022

EP. 301- Counselling -Process and Skills

Time- 9.30am – 11.00am **Date- 6-12-2022**

Marks- 30

Instructions- 1. All questions are compulsory

2. Right side figure indicates the marks

Q .1 Write the answer in 400 – 450 words (any 1) 10 Marks

A. Define generic skills of Counselling. Explain the Micro and Macro skills of Counselling. (CO-2)

OR

B. What is Building the relationship means? Explain the core conditions and in-depth exploration in counselling process. (CO-1)

Q .2 Write the answer in 400 – 450 words (any 1) 10 Marks

A. Define the concept of paraphrasing and reflecting feelings mean. Explain the listing, asking questions and self- discloser skill of a counsellor. (CO-2)

OR

B. What is terminating helping means? Explain how counsellor can improve self-talk and self-perceptions of a client. (CO-2)

Q .3 Write the answer in 400 – 450 words (any 1) 10 Marks

A. Explain the Carkhuff model & IPR model of Counselling. (CO-3)

OR

B. Explain the role of detachment and self -surrender in counselling process. (CO-1)

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DEPARTMENT OF PSYCHOLOGY
H.P.T. Arts & R.Y.K. Sc. College, Nashik-5

H.P.T. ARTS & R.Y.K. SC. COLLEGE ESTD 1924 NASHIK-5

HPT Arts & RYK Sci. college, Nashik

Psychology Department

M.A. Part- II Sem-III (22-23)

Core Paper-1: COUNSELLING PROCESS AND SKILLS

Presentation Points (CO-2 & 3)

Sr. no	Dates	Marks	Name of the students	Topics CO-2 & 3
1	1 Nov. 22	6	Pawar Aishwarya Ravindra	Paraphrasing
	1 Nov. 22	8	Kanade Trupti Arvind	Reflecting feelings
	2 Nov. 22	10	Nagdev Aayushi Vijaykumar	Listening & asking questions,x
2	3 Nov. 22	7	Ahirrao Mayur Kishor	Self-disclosing
	3 Nov. 22	6	Sonawane Amit Rajesh	Ffacilitating problem solvingiix
	7 Nov. 22	6	Marchant Atufa Irfan	Interviewing skills,
3	7 Nov. 22	7	Mehroliya Harshada Rajkumar	Training clients in relaxationiix
	9 Nov. 22	8	Jobanputra Jinal Hitesh	Improving client's self-talk
	9 Nov. 22	9	Kulkarni Harshada Rajendra	Self-perceptions,
4	10 Nov. 22	5	Lahane Manisha Tryambak	Terminating helping
	10 Nov. 22	6	Sarode Madhura Jagdish	Nature and importance of counselling skills
	14 Nov. 22	7	Mahtani Nikita Prakash	Working alliance
5	14 Nov. 22	6	Mandore Rutika Manoj	Rogers model of counselling skills
	15 Nov. 22	7	Pathak Jayesh Pdmakar	Indian models of Counselling
6	16 Nov. 22	8	Pokar Freny Kantilal	Role of detachment
	16 Nov. 22	6	Shaikh Tamanna Meraj	Self-surrender
	17 Nov. 22	9	Somani Neha Dinesh	Modern trends in counselling
7	17 Nov. 22	7	Sonar Swameeni Vijay	IPR model of counselling
	21 Nov. 22	AB	Taskar Aniket Anil	generic skills of Counselling
	21 Nov. 22	8	Wagh Mansi Sanjay	Counselling in India
8	22 Nov. 22	7	Sakhi Chahande	Goal setting process
9	22 Nov. 22	Ab	Gosavi Jayshri Vasant	Helping relationship & helping process
10	23 Nov. 22	Ab	Pardeshi Nikita Roshansing	Approaches to counselling

Subject Teacher

Archana More-Gatkal

HEAD
DEPARTMENT OF PSYCHOLOGY
H.P.T Arts & R.Y.K. Sc. College, Nashik-5

H.P.T. ARTS & R.Y.K. SC. COLLEGE ESTD 1924 NASHIK 5

HPT Arts and RYK Science College Nashik-05
Department of Psychology
MA- II -Clinical Psychology (Sem-III 2022-23)
Core Paper- Counselling Process and Skills

Sr. no	Seat No	Name of the Student	Gender	CO-1 Class Test (10 Marks) (6)	CO-1,2,3 Written Test (30 marks) (18)	CO-2 & 3 Presentations (10 Marks) (6)	Internal Marks (Out of 50) (30)
1	23750	Chahande Sakhi Milind	Female	6	14	7	27
2	23751	Jayshri Vasant Gosavi	Female	4	11	AB	15
3	23752	Pardeshi Nikita Roshan Singh	Female	AB	8	Ab	8
4	23753	Pawar Aishwarya Ravindra	Female	8	20	6	34
5	23754	Pokar Freny Kantilal	Female	8	17	8	33
6	23755	Trupti Arvind Kanade	Female	5	10	8	23
7	23756	Aayushi Vijaykumar Nagdev	Female	9	23	10	33
8	23757	Ahirrao Mayur Kishor	Male	6	11	7	24
9	23758	Amit Rajesh Sonawane	Male	4	4	7	15
10	23759	Atufa Merchant	Female	2	5	8	15
11	23760	Harshada Rajkumar Mehroliya	Female	5	18	7	25
12	23761	Jobanputra Jinal Hitesh	Female	3	12	8	23
13	23762	Kulkarni Harshada Rajendra	Female	9	21	9	39
14	23763	Lahane Manisha Trimbak	Female	5	10	5	20
15	23764	Madhura Jagdish Sarode	Female	5	6	6	12
16	23765	Mahtani Nikita Prakash	Female	2	18	7	27
17	23766	Mandore Rutika Manoj	Female	5	14	6	25
18	23767	Pathak Jayesh Padmakar	Male	4	11	7	22
19	23768	Shaikh Tamanna Meraj	Female	6	13	6	25
20	23769	Somani Neha Dinesh	Female	9	23	9	41
21	23770	Swaminee Vijay Sonar	Female	2	16	7	25
22	23771	Tasker Aniket Anil	Male	2	2	AB	4
23	23772	Wagh Mansi Sanjay	Female	8	17	8	33
			Total	117	304	146	548

Mapping	Points on scale of 3	Avg	5.08	13.21	6.34	23.82
Not Aligned	0- 0.75					
Partially Aligned	0.75-1	Criteria (60%)	9	6	21	6
Mostly Aligned	1.00 - 2.00	Scale 3	1.17	0.7	2.73	0.7
Fully Aligned	2.00 - 3.00	Mapping	Mostly Aligned	Not Aligned	Fully Aligned	Not Aligned

Action Taken/Suggestions
- Teacher can continue to use the same methodology
- Students can be motivated to practice real life situations.
- Teacher can continue with skill-oriented approach in the classroom.

Subject Teacher Sign

(Stamp)

College Stamp

Head of Dept.

HEAD (Sign)
DEPARTMENT OF PSYCHOLOGY
H.P.T. Arts & R.Y.K. Sc. College, Nashik-5

CO Mapping
Statistics Department
Subject: Theory of Estimation
T.Y.B.Sc.
Paper Code: ST-352
Syllabus

Course Outcome:
CO1: To study estimation of unknown parameters by point estimation method.
CO2: To study different methods of estimation:
a) Method of moments b) Method of maximum likelihood
CO3: To study different criteria of estimation:
a) Unbiasedness of estimator b) Variance of estimator c) Sufficiency of estimator
d) efficiency of estimator e) Consistency of estimator
CO4: To study interval estimation.

ST 352: THEORY OF ESTIMATION

1. Point Estimation and Interval Estimation (4L)

1.1 Notion of a parameter, parameter space.
1.2 General problem of estimating an unknown parameter by point and interval estimation. (using Pivotal quantity approach).
1.3 Point Estimation: Definition of an estimator, distinction between estimator and estimate,illustrative examples. Mean Square Error (MSE) of an estimator.

2. Methods of Estimation (8L)

2.1 Likelihood Function, Definition of likelihood as a function of unknown parameter for a random sample comes from i) discrete ii) continuous distribution. Distinction between the likelihood function and p.d.f. or p.m.f.
2.2 Method of maximum likelihood: Derivation of maximum likelihood estimator (M.L.E.) for parameters of only standard distributions (case of two unknown parameters only for normal distribution). Invariance property of M.L.E. M.L.E. of θ in uniform distribution over i) $(0, \theta)$ ii) $(-\theta, \theta)$ iii) $(m\theta, n\theta)$ $(m < n)$, M.L.E. of θ in $f(x ; \theta)= Exp \{-(x- \theta)\}$, $x >\theta$, M.L.E. of location parameter in Laplace distribution.
2.3 Method of moments: Derivation of moment estimator for standard distributions. Illustrations of situations where M.L.E. and moment estimators are distinct and their comparison using MSE.

3. Properties of Estimator ` (20L)

3.1 Unbiasedness: Definition of an unbiased estimator, biased estimator, positive and negative bias, illustrations and examples (these should include unbiased and biased estimators for the

same parameters). Proofs of the following results regarding unbiased estimators: (i) Two distinct unbiased estimators of (θ) give rise to infinitely many estimators. (ii) If T is an unbiased estimator of θ, then φ(T) is an unbiased estimator of φ(θ) provided φ(.) is a linear function. Variance of the estimator: Notion of the Best Linear Unbiased Estimator and uniformly minimum variance unbiased estimator (UMVUE), uniqueness of UMVUE whenever it exists.
3.2 Sufficiency: Concept and definition of sufficiency, statement of the Fisher-Neyman factorization theorem with proof for discrete probability distribution. Pitmann –Koopman form and sufficient statistic; Exponential family of probability distributions and sufficient statistic. Proof of the following properties of sufficient statistics: (i) If T is sufficient for θ, then φ(T) is also sufficient for θ provided ø is a one to one and onto function. (ii) If T is sufficient for θ then T is also sufficient for φ(θ). (iii) M.L.E. is a function of sufficient statistic.
3.3 Fisher information function: Amount of information contained in statistic
T = T(X1, X2, ...,Xn). Statement regarding information in sample and in a sufficient statistic T.
3.4 Cramer- Rao Inequality: Statement and proof of Cramer - Rao inequality, Cramer – Rao Lower Bound (CRLB), definition of minimum variance bound unbiased estimator (MVBUE) of ø (θ). Proofs of following results: (i) If MVBUE exists for θ then MVBUE exists for φ(θ) where φ(.) is a linear function.(ii) If T is MVBUE for θ then T is sufficient for θ.
3.5 Efficiency: Comparison of variance with CRLB, relative efficiency of T1 w.r.t. T2 for (i) unbiased (ii) biased estimators. Efficiency of unbiased estimator T w.r.t. CRLB.

4. Asymptotic Behavior of an Estimator (4L)

4.1Consistency: Definition.
4.2 Proof of the following theorems: (i) An estimator is consistent if its bias and variance both tend to zero as the sample size tends to infinity. (ii) If T is a consistent estimator of θ and φ(.) is a continuous function,then φ(T) is a consistent estimator of φ(θ).

Books Recommended:

1. Dudewecz, E.J. and Mishra, S.N. (1988). Modern Mathematical Statistics, John Wiley and Sons,Inc.
2. Hoel, P.G. Port, S. and Stone, C.(1972). Introduction to Statistical Theory, Houghton Mifflin Company (International) Dolphin Edition.
3. Hogg, R.V. McKean, J. and Craig A.T. (2012). Introduction to Mathematical Statistics, 7 thEdn., Pearson,
4. Kendall, M. and Stuart, A. (1943). The advanced Theory of Statistics, Vol 1, Charles and Company Ltd., London
5. B.W. Lindgren (1993). Statistical Theory, 4thEdn., CRC Press, London.
6. Mood, A.M. Graybill, F.Boes, D. (2017). Introduction to Theory of Statistics, 3rdEdn.,Mc-Graw Hill Series.
7. V.K. Rohatgi and Saleh A. K. Md. E. (2015). An Introduction to Probability Theory and Statistics, 3rdEdn. Wiley, New York
8. Ramchandran, K.M. and Tsokos C. P. (2009). Mathematical Statistics with Applications, Academic Press.

Gokhale Education Society's
H.P.T. Arts & R.Y.K. Science College, Nashik-05
Department of Statistics
T.Y.B.Sc. (Sem.-V) CBCS Pattern (2022-23)
First Internal Examination (Term-1)
ST-352:Theory of Estimation

Time: 1 Hour
Marks: 15 **Date: 24/11/2022**

Q.1 a) Choose the correct alternative. **[1 Mark each]**

i) The standard error of $\overline{X}$ based on random sample of size 100 from N (μ, 100) is

a) 5 b) 2 c) 1 d) 10

ii) Give that T is unbiased estimator of θ, then $\phi(t)$ is also unbiased estimator of $\phi(\theta)$ if the function ϕ is …… function. (CO3)

a) one to one b) linear c) continuous d) any

iii) If $X_1, X_2 \ldots$, Xn is a random sample from U (-Θ, Θ) then M.L.E. of θ is (CO4)

a) $X_{(1)}$ b) $X_{(n)}$ c) max $\{-X_{(1)}, X_{(n)}\}$ d) $\overline{X}$

Q.1 b) State whether the following statement is True or False. **[1 Mark each]**

i) M.L.E. is always consistent estimator of θ. (CO2)

ii).Uniform distribution belongs to the Exponential family.

Q.2 Attempt any <u>two</u>. **[2 Marks each]**

i) If X is a random variable with probability density function,

$$f(x) = \frac{2x}{\theta^2}, \text{ if } 0 < x < 2\theta$$

Find moment estimator of θ. (CO2)

ii) Define: i) Statistic ii) Sampling distribution of statistic.

iii) Show that there are infinitely many unbiased estimators exists for Poisson distribution..(CO3)

Q.3 Attempt any <u>two</u>. **[3 Marks each]**

i) If $X_1, X_2 \ldots\ldots$, Xn is a random sample from U (0, θ), then find M.L.E. of θ. (CO2)

ii) Show that, sample mean square is an unbiased estimator of population variance. (CO3)

iii) If $X_1, X_2 \ldots\ldots$, Xn is a random sample from N (μ, 1), then find M.L.E. of μ. (CO2)

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Gokhale Education Society's

H.P.T. Arts & R.Y.K. Science College, Nashik-05

Department of Statistics

T.Y.B.Sc. (Sem.-V)

ST-352 Theory of Estimation

Marklist of Internal Examination

Roll No.	Name of the Student	Q.1 (5 M)	Q.2 (4M)	Q.3 (6M)	Total
1	Ahire Vaibhav Gulab	5	2	2	9
2	Antony Angel	4	4	4	12
3	Attar Farida Sikandar	4	4	6	14
4	Bhanose Nikhil Rajesh	5	4	6	15
5	Bhoi Nilesh Sawan	5	0	0	5
6	Dahale Chaitnya Sunil	5	4	2	11
7	Deochake Nupur Prasad	4	4	5	13
8	Deore Leena Hemant	4	4	0	8
9	Dokhale Avantika Ganesh	4	4	3	11
10	Gaidhani Sankalp Kailas	4	4	6	14
11	Gurule Mayur Sharad	5	4	2	11
12	Jangid khushi santosh	5	4	5	14
13	Joshi Devashri Pravin	5	4	4	13
14	Kadu Madhura Sanjay	5	4	6	15
15	Kelkar Saisha Prasad	4	4	2	10
16	Kolhe Tejas Ananda	4	3	0	7
17	Kotharkar Mahesh Vishweshwar	5	3	1	9
18	Kulkarni Shravani Anil	5	4	3	12
19	Kurhade Neha Ramnath	5	4	6	15
20	Magar Hrushikesh Balasaheb	5	1	0	6
21	Mankar Rishikesh Avinash	5	2	0	7
22	Pandit Bablu Ramashankar	5	3	3	11
23	Pandit Sumeet Hareram	4	4	4	12
24	Patil Shrushti Ramchandra	2	3	2	7
25	Patro Saikrishna	5	3	0	8
26	Pawar Shubhada Dhanajay	5	4	2	11
27	Poi Pradeep Kamalakanta	5	4	0	9
28	Rathod Chetan Saltan	5	3	1	9
29	Sharma Vivek Mahesh	4	3	4	11

30	Shirore Sakshi Sudhakar	4	4	1	9
31	Shukla Shruti Shyamsundar	5	4	3	12
32	Singh Namrata anoj	4	3	1	8
33	Singh Pratik Ramprakat	4	4	6	14
34	Sonawane Aayush Dadasaheb	5	2	0	7
35	Sonawane Prasad Rajendra	5	2	1	8

Subject Teacher
(U.R.Yevole)

College Stamp

Head of Department
(Dr. R.D.Naik)

CO-PO Mapping Analysis

Roll No.	Name of the Student	Q.1 (5 M) CO3	Q.2 (4 M) CO3	Q.3 (6 M) CO2	Total
1	Ahire Vaibhav Gulab	5	2	2	9
2	Antony Angel	4	4	4	12
3	Attar Farida Sikandar	4	4	6	14
4	Bhanose Nikhil Rajesh	5	4	6	15
5	Bhoi Nilesh Sawan	5	0	0	5
6	Dahale Chaitnya Sunil	5	4	2	11
7	Deochake Nupur Prasad	4	4	5	13
8	Deore Leena Hemant	4	4	0	8
9	Dokhale Avantika Ganesh	4	4	3	11
10	Gaidhani Sankalp Kailas	4	4	6	14
11	Gurule Mayur Sharad	5	4	2	11
12	Jangid khushi santosh	5	4	5	14
13	Joshi Devashri Pravin	5	4	4	13
14	Kadu Madhura Sanjay	5	4	6	15
15	Kelkar Saisha Prasad	4	4	2	10
16	Kolhe Tejas Ananda	4	3	0	7
17	Kotharkar Mahesh Vishweshwar	5	3	1	9
18	Kulkarni Shravani Anil	5	4	3	12
19	Kurhade Neha Ramnath	5	4	6	15
20	Magar Hrushikesh Balasaheb	5	1	0	6
21	Mankar Rishikesh Avinash	5	2	0	7
22	Pandit Bablu Ramashankar	5	3	3	11
23	Pandit Sumeet Hareram	4	4	4	12
24	Patil Shrushti Ramchandra	2	3	2	7
25	Patro Saikrishna	5	3	0	8
26	Pawar Shubhada Dhanajay	5	4	2	11
27	Poi Pradeep Kamalakanta	5	4	0	9
28	Rathod Chetan Saltan	5	3	1	9
29	Sharma Vivek Mahesh	4	3	4	11
30	Shirore Sakshi Sudhakar	4	4	1	9
31	Shukla Shruti Shyamsundar	5	4	3	12
32	Singh Namrata anoj	4	3	1	8

33	Singh Pratik Ramprakat	4	4	6	14
34	Sonawane Aayush Dadasaheb	5	2	0	7
35	Sonawane Prasad Rajendra	5	2	1	8
	Total	159	117	91	367
	Average	4.542857143	3.342857143	2.6	10.48571429

Criteria > 60%	>= 3	>=2.4	>=3.6
No. of Students	35	29	12
Ranking	3	2.485714286	1.028571429
Alignment Status	Fully Aligned	Fully Aligned	Mostly Aligned

Action Taken/Suggestions:

- Teacher can continue to use the same methodology.
- Students can be motivated to practice real life situations.
- Teacher can continue with a Practical-oriented approach in the classroom.

Subject Teacher
(U.R.Yevole)

College Stamp

Head of Department
(Dr. R.D.Naik)

CO Mapping

Department: Zoology

T.Y.B.Sc.: ZY 366 Cell Biology

Course Outcome

CO1: Differentiate between prokaryotic and eukaryotic cells in terms of size, shape, and structure, and appreciate the scope of cell biology as a scientific discipline.

CO2: Describe the structural models of the plasma membrane, understand membrane receptors, and explain the mechanisms of passive and active transport, including processes like endocytosis and exocytosis.

CO3: Identify the types, ultrastructure, and functions of the smooth and rough ER in cellular processes.

CO4: Discuss the morphology, origin, and functional roles of the Golgi apparatus in protein modification and trafficking.

CO5: Explain the ultrastructure, polymorphism, and functional significance of lysosomes in cellular metabolism and waste processing.

CO6: Analyze the ultrastructure of mitochondria and explain their role in energy production, excluding detailed biochemical cycles

CO7: Discuss the structural features of the nucleus, including nuclear membranes, pores, nucleolus, and nucleocytoplasmic interactions, and their functional significance.

CO8: Describe the ultrastructure, biochemical composition, and functional roles of microfilaments, intermediate filaments, and microtubules in

maintaining cell shape and enabling intracellular transport.

CO9: Explain the phases of the cell cycle, mechanisms of mitosis and meiosis, and the role of centrioles in cell division.

CO10: Discuss the theories of cellular ageing, intracellular and extracellular changes, and distinguish between apoptosis and necrosis, with examples of their biological significance.

CO11: Identify the distinguishing features of cancer cells, analyze hypotheses regarding their causes, and differentiate between intrinsic and extrinsic factors involved in carcinogenesis.1

ZY- 336 (Paper VI)

b) Cell Biology

Total lectures: 48

1	**Introduction to Cell biology:**	3
	1.1 Definition and scope	
	1.2 Prokaryotic and eukaryotic cell: size, shape and structure	
2	**Plasma membrane:**	6
	2.1 Unit membrane concept	
	2.2 Models: Lipid membrane, Protein-Lipid (Danielli-Davson) and Fluid Mosaic	
	2.3 Membrane receptors	
	2.4 Membrane transport: Passive and Active	
	2.5 Exocytosis and Endocytosis (Phagocytosis and Pinocytosis)	
3	**Endoplasmic reticulum:**	5
	3.1 Occurrence and ultrastructure	
	3.2 Type: smooth and rough	
	3.3 Functions	
4	**Golgi complex:**	3
	4.1 Origin, occurrence and morphology	
	4.2 Ultrastructure and functions	
5	**Lysosomes:**	3
	5.1 Origin, occurrence and morphology	
	5.2 Ultrastructure, polymorphism and functions	
6	**Mitochondria:**	4
	6.1 Origin, occurrence and morphology	
	6.2 Ultrastructure and functions (explanation of the cycles not expected)	
7	**Nucleus:**	6
	7.1 Shape, Size, number and position	
	7.2 Ultrastructure of nuclear membrane and pore complex	
	7.3 Nucleolus: general organization, chemical composition and functions	
	7.4 Nuclear sap/ nuclear matrix	
	7.5 Nucleocytoplasmic interactions	

8	**Cytoskeleton:**	3
	8.1 Microfilaments: location, ultrastructure, biochemical composition and functions	
	8.2 Intermediate Filament: location, ultrastructure, biochemical composition and functions	
	8.3 Microtubules: location, ultrastructure, biochemical composition and functions	
9	**Cell cycle and cell division:**	6
	Various phases of cell cycle, mitosis, meiosis & role of centriole in the cell division	
10	**Cellular ageing and cell death:**	4
	10.1 Concept of ageing theories:	
	10.1.1 Intracellular changes: free radicals	
	10.1.2 Extra cellular changes	
	10.2 Cell death:	
	10.2.1 Apoptosis: definition and significance	
	10.2.2 Necrosis: definition and examples	
11	**Cancer cell:**	5
	11.1 Characteristics	
	11.2 Theories/ hypothesis regarding causes of cancer	
	11.2.1 Extrinsic causes: physical, chemical and biological agents (viruses).	
	11.2.2 Intrinsic causes: somatic mutations, oncogenes and ageing related phenomenon	

Questions

Q1. Cell was discovered by_____? **(CO1)**

Q2. Plasma membrane of prokaryotic cell shows infolding called as _____? **(CO2)**

Q3. What can you comment about the surface area of the following shapes? **(CO7)**

Q4. Engulfment of solid particle is called as _____ **(CO5)**

Q5. _____ ligands cannot cross cell membrane **(CO8)**

Marksheet

Roll No.	Name	CO1	CO2	CO7	CO5	CO8
		Q1	Q2	Q3	Q4	Q5
1	Rajshreyash Dilipkumar Adhav	1	0	0	0	1
2	Akash Eknath Bagul	1	1	1	1	1
3	Sourabh Jaydev Bagul	1	1	1	1	1
4	Namrata Devanshwar Bhandure	1	1	1	1	0
5	Ravina Ramesh Chaudhari	1	1	1	1	1
6	Surekha Ganesh Chavan	1	1	1	1	1
7	Siddhant Rajendra Choudhari	1	0	1	1	1
8	Aditya Krishandeo Choudhary	1	1	1	1	1
9	Ganesh Suresh Dhole	1	1	0	1	0
10	Apoorva Ajay Gangwal	1	1	1	1	1
11	Shardul Shailesh Ghaisas	1	1	1	1	1
12	Vaishnavi Pravin Jagtap	1	1	1	1	1
13	Nikita Ramesh Jawale	1	1	1	1	1
14	Sapna Baban Jojale	1	1	1	1	1
15	Diksha Prakash Joshi	1	1	1	1	1
16	Chirag Subhash Junnare	1	1	0	1	1
17	Yadnee Anil Kadam	1	1	1	1	1
18	Bhoomi Rajendra Kalgaonkar	1	1	1	1	1
19	Aishwarya Devanand Kapse	1	1	1	1	1
20	Shreelaxmi Saji Kareeparath	1	1	1	1	1
21	Hansraj Raghunath Kedare	1	1	1	1	1
22	Maya Prakash Khande	1	1	1	1	1
23	Smital Balu Komboade	1	1	0	1	1
24	Zulfin Parvez Kotwal	1	1	0	1	1
25	Rucha Pradeep Kulkarni	1	1	1	1	1
26	Sudarshan Sadanand Kumare	1	1	1	1	0
27	Vidya Somnath Lohar	1	1	1	1	1
28	Kalyani Somnath Mandhe	1	1	1	1	1
29	Gayatri Sachchidanand More	1	1	0	1	1
30	Priya Machindra Pagare	1	1	1	1	1
31	sanket pramod pakare	1	1	1	1	1
32	Siddhi Prashant Parisare	1	1	1	1	1
33	Rohit Purdik Patil	1	1	1	1	1
34	Saurabh Kishor Patil	1	1	0	1	1
35	Yogeshwari Shivaji Pawar	1	1	0	1	0
36	Pratik Prabhakar Pawar	1	1	0	1	1
37	Ejaz Ahmed Shaikh	1	1	1	1	1
38	Sakshi Vijay Shinde	1	1	1	1	1
39	Vanita Dilip Shinde	1	1	0	1	1
	Criteria (60%)	39	37	29	38	35
	Scale 3					
	Mapping	**3**	**2.85**	**2.23**	**2.92**	**2.69**
		Fully Aligned	**Fully Aligned**	**Fully Aligned**	**Fully Aligned**	**Fully Aligned**

M.P.T. ARTS, S.M.T. K. SCIENCE COLLEGE NASHIK 422005

Internal Examiner

CO Mapping

Department: Zoology

T.Y.B.Sc.: ZO 366 Evolutionary Biology

Course Title: Evolutionary Biology
Course Code: ZO 366
Credits: 02

ZO 366 - Evolutionary Biology

Objectives:

1. To provide comprehensive overview of Concept of Evolution.
2. To explain Origin of Life especially Prokaryotes as well as Eukaryotes in detail.
3. To explore salient features of various theories of evolution comprising of Lamarckism, Darwinism and Neo-Darwinism.
4. To impart detailed understanding of Analogy, Homology, Paleontological Evidences, Embryological Evidences and Molecular Phylogeny.
5. To provide adequate information about Geological Time Scale and Neutral Theory of Molecular Evolution.
6. To develop comprehensive knowledge regarding various Sources of Variations and their role in evolution.
7. To give detailed explanation of key concepts of Population Genetics in terms of Hardy-Weinberg Law, Genetic Drift and Types of Natural Selection.
8. To provide adequate knowledge about Micro-evolutionary changes, Speciation and Adaptive Radiation.
9. To give detailed outline of Extinctions and its types.
10. To impart descriptive knowledge regarding Origin and Evolution of Man.

11. To provide glimpse of Phylogenetic Trees and highlight their construction along with interpretation.

Learning outcomes

After completing the course, the student should be able to

1. Students will be able to learn most of the essential aspects of Evolutionary Biology in detail which will help them in acquiring better understanding regarding the subject.
2. Explain important processes, principles and concepts and critically evaluate theories and empirical research within evolutionary biology
3. Apply evolutionary theory and concepts to address empirical and theoretical questions in evolutionary biology.
4. Independently investigate evolutionary questions using literature and analyses of empirical data.
5. Communicate the principles, theories, problems and research results associated with questions that lie within the evolutionary framework to students

Title & Contents	Number of lectures
1. Introduction: 1.1 Concept of Evolution. 1.2 Origin of life. 1.3 Origin of eukaryotic cell (Origin of mitochondria, plastids & symbionts).	4 L
2. Evidences of Evolution: 2.1 Analogy and Homology. 2.2 Embryological Evidences of Evolution. 2.3 Evolutionary & Paleontological Evidences.	5 L
3. Historical Review of Evolutionary Concept: 3.1 Theories of Evolution. 3.2 Lamarckism. 3.3 Darwinism and Neo Darwinism. 3.4 Mutation Theory. 3.5 Modern Synthetic theory.	3 L
4. Sources of Variation: 4.1 Variation and Mutations.	4 L
5. Isolation	5 L
6. Speciation: 6.1 Types of speciation (Allopatric & Sympatric). 6.2 Mechanism of speciation. 6.3 Patterns of speciation. 6.4 Factors influencing speciation.	4 L

7 Population Genetics: **2 L**

7.1 Hardy-Weinberg Law & Genetic Drift.

7.2 Types of Natural Selection.

8 Origin of Man: **4 L**

8.1 Evolution of Man (Evolution of anthropoids including man) - Kenyapithecus to *Homo sapiens*.

9 Zoogeographical Realms With reference to fauna: **2 L**

10 Extinctions: **2 L**

10.1 Extinction - An Overview.

Reference Books

1. Mark Ridley. Evolution. 3rd Edition. Blackwell Publishing. (2004).
2. Mathur, Tomar, Singh. Evolution and Behaviour. Rastogi Publication, Merrut.
3. Mohan P. Arora. Evolutionary Biology, Himalaya Publishing House, Bombay.
4. P. S. Vermin and V. K. Agarwal. Cell Biology, Genetics, Molecular Biology, Evolution and Ecology, Revised Edition. S. Chand Publication (2004).
5. Strickberger. Evolution. Prentic Hall. (2002).
6. Theodore H., Jr Eaton. Evolution. 1st Edition. W. W. Norton Publication. (1970).
7. Organic Evolution, Richard Swann Lull, Light & Life Publishers.
8. Introductions to Evolution, Paul Amos Moody, Kalyani Publishers, New Delhi.
9. Organic Evolution, 1991 T.S. Gopal krishanan, Itta Sambashivarab Publ. House.
10. Evolutionary Biology, 1990, Mohan P. Arora, Himalaya Publi. House, Delhi.
11. Evolution, 1968, E. O. Dodson, Reinhold Publ. Crop., New York.
12. The major features of evolution, 1953, Simpson G. G. Columbia, New York.
13. The origin of species, 1959, Charles Darwin, New American Library, New York.

Course Title: Environmental Impact Assessment
Course Code: ZO 3610
Credits: 02

ZO 3610 - Environmental Impact Assessment

Title & Contents	Number of lectures
1. Environment: 1.1 Definition. 1.2 Divisions. 1.3 Importance.	**2 L**
2. Pollution: 2.1 Definition and types. 2.2 Impact on wildlife, natural resources, development.	**3 L**
3. Sustainable development:	**2 L**

Questions

Q1. Peripatus is connecting link between_____&_____? **(CO4)**

Q2. "_____ recapitulates Phylogeny"?**(CO5)**

Q3. Use and disuse theory was given by____?**(CO3)**

Q4. Sewall Wright effect is another name for _____**(CO7)**

Q5. After a bottleneck event, the size of population_____**(CO8)**

Q6. The reproductive isolation occurring before mating is a type of _____ isolation.**(CO6)**

Marksheet

Name	CO4 Q1	CO5 Q2	CO3 Q3	CO7 Q4	CO8 Q5	CO6 Q6
Siddhi Prashant Pansare	1	1	1	1	1	1
Rucha Pradeep Kulkarni	1	1	1	1	1	1
Shreelaxmi Saji Kareepadath	1	1	1	1	1	1
Pratik Prabhakar Pawar	1	1	1	1	1	1
Zulfin Parvez Kotwal	1	1	1	1	1	1
Sapna Baban Jogale	1	1	1	1	1	1
Shardul Shailesh Ghaisas	1	1	1	1	1	1
Saurabh Kishor Patil	1	1	1	1	1	1
Rajshreyash Dilipkumar Adhav	1	1	1	1	1	1
Sakshi Vijay Shinde	1	1	1	1	1	1
Siddhant Rajendra Choudhari	1	1	1	1	1	1
Surekha Ganesh Chavan	1	1	1	1	0	1
Aditya krishandeo Choudhary	1	1	1	1	1	1
Smital Balu Kombade	1	1	1	1	1	1
Apoorva Ajay Gangwal	1	1	1	1	1	1
Abdul Qaiyyum Ejaz Shaikh	1	1	1	1	1	1
Priya Machindra Pagare	1	1	1	1	1	1
Sudarshan Sadanand Kumare	1	1	1	1	1	1
Hansraj Raghunath Kedare	1	1	1	1	1	1
Bhoomi Rajendra Kaloge	1	1	1	1	1	1
Vidya Somnath Lohar	1	1	1	1	1	1
Sourabh Jaydev Bagul	1	1	1	1	1	0
Vaishnavi Pravin Jagtap	1	0	1	1	1	1
Yogeshwari Shivaji Pawar	1	1	1	1	1	1
Diksha Prakash Joshi	1	1	1	1	1	1
sanket pramod pagare	1	1	1	1	1	1
Vanita Dilip Shinde	1	1	1	1	1	1
Ganesh Suresh Dhole	1	1	1	1	1	1
Chirag Subhash Junnare	1	1	1	1	1	1
Namrata Dnyaneshwar Bhandure	1	1	1	0	0	1
Akash Eknath Bagul	1	1	1	1	1	1
rohit pundlik patil	1	1	1	1	1	1
Prakash Maya Kharde	1	1	1	1	1	1
Nikita Ramesh Jawale	1	1	1	1	1	1
YADNEE ANIL KADAM	1	1	1	1	1	1
Vanita Shinde Dilip	1	1	1	1	1	1
Gayatri Sachhidanand More	1	1	1	1	1	1
Aishwarya Devanand Kapse	1	1	1	1	1	1
Kalyani Somnath Mondhe	1	1	1	1	1	1
Ravina Ramesh Chaudhari	1	1	1	1	1	1
Uma Rajendra Shinde	1	1	1	1	1	1
Criteria (60%)	41	40	41	40	39	40
Scale 3	2.93	2.86	2.93	2.86	2.79	2.86
Mapping	Fully Aligned	Fully Aligned	Fully Aligned	Fully Aligned	Fully Aligned	Fully Aligned

M.P.T.'s A.R.Y.K. SCIENCE COLLEGE NASHIK 422005

Internal Examiner

CO Mapping

Department: Zoology

T.Y.B.Sc.: ZY 354 Genetics

Course Outcomes:

Upon successful completion of this course, students will be able to:

CO1: Define and differentiate between classical and modern genetic concepts such as cistron, muton, and recon.

CO2: Apply Mendel's laws to understand patterns of inheritance and analyze exceptions like incomplete dominance, co-dominance, and multiple alleles in ABO and Rh blood group systems.

CO3: Classify mutations and describe their types and causes, with an emphasis on mutagenic agents and their effects.

CO4: Analyze sex determination mechanisms and explain unique phenomena such as gynandromorphism and hypodiploidy.

CO5: Demonstrate an understanding of population genetics concepts, including the Hardy-Weinberg equilibrium, and calculate allele frequencies in populations.

CO6: Identify and describe genetic disorders and chromosomal abnormalities such as aneuploidy and their implications in human health.

CO7: Explain sex-linked inheritance patterns in humans through examples like colour blindness and haemophilia.

CO8: Integrate genetics knowledge into real-world applications such as genetic counselling, diagnostics, and advanced breeding technologies.

6.1 Introduction.
6.2. Fatty acids - Types and nomenclature (saturated and unsaturated).
6.3 Clinical significance (obesity, atherosclerosis, myocardial infarction).
6.4 Biological importance of lipids.

Reference books

1. Principles of Biochemistry, 1993, Lehninger A. L. Nelson D. L. & Cox M. M. W. H. Freeman Company, USA.
2. Biochemistry, 1995 5th Edn. Zuby G. W, C. Brown Communications USA.
3. Harpers Biochemistry, 1996 26th Edn. p Murray R. K., Granner D. K., Mayes P. A. & Rodwell V. W. Prentice Hall international USA.
4. Outline of Biochemistry, 1995 5th Edn, Conn E. E., Stumph P. K. Bruening G & Doi R. H. John Wiley & Sons, USA.
5. Principals of Biochemistry, 1993, 1st Edn., Pattabhiraman T. N. Gajanan Book publishers and distributors Bangalore.
6. Clinical Biochemistry, 1994, B. P. Godkar, Bhalini Publishing House, Mumbai.
7. Biochemistry, 1995 5th Edn., Stryer San Francisco, W. H. Freeman & Co.
8. Biochemistry, 1990, 8th Edn., D. Voet & J. Voet, John Willey, New York
9. David T. Plummer: An Introduction to Practical Biochemistry, IIIrd edition (1988)

Course Title: Genetics
Course code: ZO 354
Credits: 02

ZO 354 - Genetics

Title & Contents	Number of lectures
1. Introduction to genetics: 1.1 Classical and Modern concept of Gene, Cistron, Muton, Recon. 1.2 Mendel's laws of Inheritance.	**3 L**
2 Exceptions to Mendelian Inheritance: 2.1 Incomplete dominance. 2.2 Co-dominance. 2.3 Multiple alleles: Concept, characteristics and importance of multiple alleles, ABO & Rh - blood group system and its medico legal importance. 2.4 Lethal alleles.	**6 L**
3. Gene Mutation: 3.1 Definition. 3.2 Types of mutations: spontaneous, induced, somatic, gametic, forward, reverse. Types of point mutation - deletion, insertion, substitution, transversion, transition. 3.3 Mutagenic agents a) UV radiation and ionising radiation. b) Base analogs, alkylating and intercalating agents.	**6 L**

4. Sex-determination: **4 L**

4.1 Introduction.

4.2 Types of sex determination: -XX-XY, ZZ-ZW, XX-XO and Parthenogenesis, Hypodiploidy.

4.3 Gynandromorphism.

5. Population Genetics: **3 L**

5.1 Basic Concepts in population genetics: Mendelian population, gene pool, gene / allele, Frequency, chance mating (Panmictic mating).

5.2 Hardy Weinberg law and its equilibrium.

6. Human Population Genetics: **4 L**

6.1 Karyotype.

6.2 Genetic disorders, Structural & numerical alterations of chromosomes (chromosomal aneuploidy - Down, Patau, Edward, Turner and Klinefelter syndromes).

7. Sex linked inheritance in human: **2 L**

7.1 Colour – blindness.

7.2 Haemophilia.

7.3 Hypertrichosis.

8. Application of genetics: **2 L**

8.1 Genetic counselling.

8.2 Diagnostics & breeding technology.

Reference Books -

1. Principles of Genetics, 1997, P. D. Snustad, M. L. Simmons J. B. Jenkins, John Wiley & Sons, USA
2. Genetics, 2014, 9th Edn., Verma P. S. and Agarwal V. K., S. Chand and Co., New Delhi.
3. Genetics, 2014, 4th Edn. Gupta P. K., Rastogi Publications, Meerut.
4. Principles of Genetics, Gardner, E. J. *et al.* (2006), John Wiley and Sons Inc.
5. Genetics: A Molecular Approach, 3rd Edn, Russell, P. J., Benjamin Cummings.
6. Principles of Genetics 8th Edition, Gardner, E. J., Simmons, M. J., Snustad, D. P. (2008). John Wiley and Sons Inc.
7. Principles of Genetics. 5th Edn. Snustad, D. P. and Simmons, M. J. (2009). John Wiley and Sons Inc.
8. Concepts of Genetics, 10th Edn. Benjamin Cummings. Klug, W. S., Cummings, M. R. and Spencer, C. A. (2012).
9. An Introduction to Genetic Analysis, 11th Edn. Carroll S. B.; Doebley J., Griffiths, A. J. F. and Wessler, S. R. (2018) W. H. Freeman and Co. Ltd.

Questions based on Course Outcomes:

Q1. Genetic Information in a DNA molecule is coded in the _____? **(CO1)**

Q2. If the sequence of bases along one side of the DNA molecule is AAGCT, Then the complementary sequence of bases on the other side of DNA molecule is____?**(CO2)**

Q3. Which of the following is an agent of mutation?**(CO3)**

Q4. Which of the following organisms show heterogametic female?**(CO4)**

Q5. Trisomy of 13th chromosome is called _____?**(CO6)**

Marksheet

Name	CO1	CO2	CO3	CO4	CO6
	Q1	Q2	Q3	Q4	Q5
Ruikar Devyani Rajendra	0	0	1	0	1
MAKWANA Gayatri Deepak	1	1	1	0	1
Sharma Prajwala Omprakash	1	1	1	0	1
Bachhav Anagha Pradip	1	1	1	0	1
Bhanose Gayatri Bhimashankar	1	1	1	1	1
BAHUN SHEETAL KARANRAJ	1	1	1	1	1
Moolya Kashish Ganesh	1	1	1	0	1
Yashod Anushka Milind	1	1	1	1	1
Thakkar Sanjana Kishore	1	1	1	0	1
Kharade Alka Rupchand	1	1	1	0	1
Niphade Pritam Sanjay	1	0	1	1	1
Siddiqui Hasnain	1	1	1	1	1
Mahajan Komal Kishor	1	1	1	1	1
Dhore Rutuja Kailas	1	1	1	1	1
Borse Divyal Shrikant	1	0	1	1	1
Rai Abhishek Rambabu	1	1	1	1	1
Pandey Pranjal Vinod	1	0	0	1	1
Patel Samrose Latif	1	1	1	1	1
Kokni Noorjen Sameer	1	1	1	1	1
Shinde Mahesh Shrimant	1	0	1	1	1
Vadodkar Aditya Sunil	1	1	1	1	1
Roy Rajat Ranjitkumar	0	1	1	0	1
Gokhale Madhura Dhananjay	1	1	1	1	1
Dhikale Darshan Hiraman	1	0	1	1	1
Dhande Niraj Vasudev	1	0	1	1	1
Bhogale Vaibhav Prakash	1	0	1	1	1
Dhikale Mohit Kailas	1	0	1	1	1
Kale Sanket Shashikant	1	0	1	1	1
Jopale Dipika Namdeo	1	1	1	0	1
Kumbhakaran Hrutuja Kishor	1	0	1	1	1
Bidve Mayur Suresh	1	1	1	0	1
Singh Sapeksha Pramod	1	0	1	1	1
Inamdar Mubashira Rafique	1	0	1	1	1
Vasave Priyanka Vijay	1	1	1	0	1
Gote Vaishali Ganpat	1	0	1	1	1
Saini Lalita Chauthmal	1	1	1	1	1
Sonar Samruddhi Rajendra	1	1	1	1	1
Thormise Rutuja Subhash	0	1	1	1	1
Shaikh Shaaz Fatema	1	1	1	1	1
Tambe Pooja Navalpath	1	0	1	1	1
Criteria (60%)	37	25	39	29	40
Scale 3	2.775	1.875	2.925	2.175	3
Mapping	Fully Aligned	Mostly Aligned	Fully Aligned	Fully Aligned	Fully Aligned

Internal Examiner