

	<p align="center">NPR College of Engineering & Technology NPR Nagar, Natham, Dindigul - 624401, Tamil Nadu, India. Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai An ISO 9001:2015 Certified Institution Phone No: 04544- 246 500, 246501, 246502. Website : www.nprcolleges.org, www.nprcet.org, Email nprcetprincipal@nprcolleges.org</p>	
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CRITERION 2 TEACHING – LEARNING AND EVALUATION

KEY INDICATOR 2.2 CATERING TO STUDENT DIVERSITY

Metric No 2.2.1 The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners

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Academic Year

2019 -20



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POLICY ON SLOW LEARNERS AND ADVANCED LEARNERS

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NPR COLLEGE OF ENGINEERING AND TECHNOLOGY



VISION

To develop students with intellectual curiosity and technical expertise to meet the global needs.

MISSION

- To achieve academic excellence by offering quality technical education using best teaching techniques.
- To improve Industry – Institute interactions and expose industrial atmosphere.
- To develop interpersonal skills along with value based education in a dynamic learning environment.
- To explore solutions for real time problems in the society.



POLICY ON SLOW LEARNERS AND ADVANCED LEARNERS

This policy paper is conceded as the “Policy on Slow Learners and Advanced Learners” of NPR College of Engineering and Technology , Natham , Dindigul. By virtue of this Policy the College pronounces its assurance to the proper counsel for the enhancement of the slow learners to be better on their way of academic and personal life and advanced learners to be extraordinary in the academic and other extracurricular activities.

Categorization of New Budding Engineers

We organised bridge courses to familiarize the basic fundamentals and we also conducted one day Motivational Program for all the new budding engineers to expose the opportunities available in the field of Engineering.

The Students belonging to first years are taxonomies as Tamil Medium Students / Poor Cut off marks in XII Standard / Poor Knowledge in computing skills.

The purpose of assessment of the learning levels of the students and conduction of activities for them is to help them out for improvement in their academics.

Methods to identify Slow Learners and Advanced Learners

Each and Every faculty must deal with different categories of students; some are very intelligent who learn very fast and some are quite weak who learn very slowly. Therefore, it is required to determine the abilities of the students in the class. Based on the ability determined, some students need only guidance and some students need a hard work and regular attention.

A good teaching methodology helps a lot to make either an advanced learner to get more connected with the class or a slow learner he/she may not get away from the concentration.

A student may have his/her own way of getting knowledge and standing with what they had learnt. It varies from one to the other.



1. To validate a student's capacity he/she will be assessed by daily class tests, internal exam and practical sessions as a whole right from first to the final year, which will be taken for grading their internal marks as well.
2. Slow learner and advanced learners would be identified for each subject separately by respective faculty members for all the semesters.
3. The student as an individual is identified as Advanced learners if he/she scores equal to or greater than 60% [$\geq 60\%$] of marks in his/her internal exams and the students scored less than 60% [$< 60\%$] are identified as Slow learners.

SLOW LEARNERS

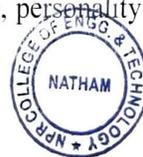
The slow learners are always lagging in academic performance. They may fail in exams or score poor marks. They need more attention towards their studies to enhance and endure their level of grade.

Methodologies to support Slow Learners

- Remedial are conducted with appropriate focus on the subject/topic codes in which the students are found to be slow learners
- Individual academic counseling is done by concerned subject faculty.

POLICY GUIDELINES FOR SLOW LEARNERS

- Remedial Course for slow learners, absentees and students involved in sports activities which help slow learners to improve subject knowledge with the result of catching up with their peers.
- Bridge Course for first year students
- Orientation and Induction Programme at College and departmental level for fresher's
- Special attention is given to the students in the remedial classes, who are identified as the slow learners.
- Slow learners are specially advised and counseled by a staff mentor and the subject expert.
- The students are given with training on communication skills, personality development, time management and motivational sessions.



- Academic and personal counseling are given to the slow learners by the mentor.
- Bilingual explanation and discussions are imparted to the slow learners after the class hours for better understanding.
- Provision of simple and standard lecture notes/course materials and special preparation for the exams will be good.
- Getting the support of the advanced learners to the slow learners in making their learning process more participatory and interesting.
- Encouraging the group learning activities and practical will be useful to the slow learners.

ADVANCED LEARNERS

The Advanced learners are those who can grab concepts faster than others and can make best outputs on various tests they go through. They take into themselves greater responsibilities, by showing interests on both Academic and extracurricular activities.

Methodology to encourage Advanced Learners

1. Advanced learners are motivated to strive for higher goals. They are encouraged to organize as well as to participate in Symposium, Workshop, various technical competitions and Seminar to gain Knowledge.
2. Helping them to participate in group discussions, technical quizzes to develop analytical and problem solving abilities in them and thereby, to improve their presentation skills.
3. Regular Motivation is given to the students to prepare for the Placement, Competitive Exams and Entrepreneurship.

POLICY GUIDELINES FOR ADVANCED LEARNERS

- Advanced learners are motivated to strive for higher goals. They are provided with additional inputs for better career planning and growth through offering special coaching for higher level competitive examinations
- Encouragement to identify and utilize the web learning resources



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- Motivation to participate in interactive activities like debates, group discussion on and out of the syllabi contents and participation in various cultural, extra-curricular and research competitions in and out of the college.
- To provide need based facility in departments and library to advanced learners.
- Personal Counseling as and when the students turn up for the guidance
- Arrangement of Guest lectures.
- Students enrolled into SWAYAM Courses
- Students are engaged in ICT enabled teaching learning and LMS with considerable responses.
- They are made the supporters to the average and the slow learners.



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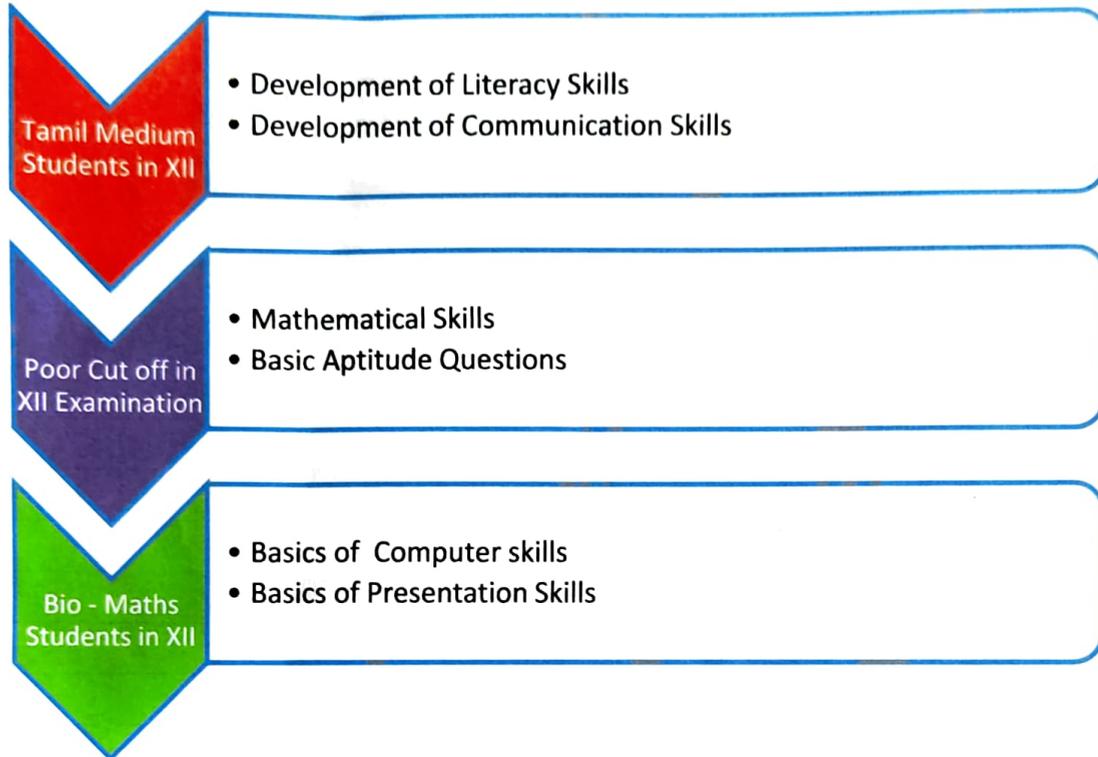
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DEPARTMENT OF SCIENCE AND HUMANITIES

CATEGORIZATION OF NEW BUDDING ENGINEERS



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Ref: NPRCET/S&H/Coaching/2019-20

09.08.2019

• CIRCULAR

The Special coaching classes will be conducted for the first year students those who are from Tamil medium, Poor cut off in XII standard Mathematics and computing skills for the Biology students on 13-08-2019 to 16-08-20219. The students are advised to make use of these special coaching classes successfully. The Classes handling faculty list, department wise students Name list and Time Table will be displayed in the First year department Notice Board.


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Copy to

1. Office
2. Department Notice board
3. File

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DEPARTMENT OF SCIENCE AND HUMANITIES

THE FACULTY NAME LIST FOR THE SPECIAL COACHING CLASSES

S. NO	NAME OF THE FACULTY	SUBJECT
1.	1. Mrs. V. Sujitha, AP/CSE 2. Mrs. J. Prisca Mary, AP/CSE 3. Mrs. J. Bama, AP/CSE	Basics of Computer Skills & Presentation Skills
2.	1. Mrs. A. Kanimozhi, Asso. Prof/Maths 2. Mrs. R. Muthukumari, AP/ Maths 3. Ms. S. Kanagalakshmi, AP/Maths	Basic Mathematical Skills and Aptitude.
3.	1. Mrs. K. Kavitha, AP/English 2. Ms. R. Sindhu, AP/ English 3. Ms. S. Suganya, AP/English	Development of Literacy and Communication Skills.


HoD


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DEPARTMENT OF SCIENCE & HUMANITIES

DEVELOPMENT OF LITERACY AND COMMUNICATION SKILLS

SYLLABUS

- Listen to simple conversations in everyday contexts and respond
- Practice production of stress, intonation and problem sounds
- Listen to lectures, presentations and other suitable listening materials from electronic media, and take notes
- Listen to telephone calls and respond; keep notes while listening
- Use conversation starters: introducing oneself; introducing others; small talk: family, friends, hobbies, profession, studies etc
- Pronunciation practice: Stress and syllables; word stress; contracted forms; utterance stress; uses of a dictionary for pronunciation practice
- Congratulate people on their success, Apologize
- Skimming through reading texts and determine two or more main ideas or themes
- Scanning through reading texts to understand and explain how key details support the main ideas or themes




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DEPARTMENT OF SCIENCE & HUMANITIES

BASIC MATHEMATICAL SKILLS AND APTITUDE

SYLLABUS

- Differentiation – Product rule, Quotient rule, algebraic function, exponential function, logarithmic function, trigonometric function, inverse function.
- Integration – single integral -algebraic function, exponential function, logarithmic function, trigonometric function, inverse function.
- Double Integration
- Permutation and combination
- Problems on Trains




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DEPARTMENT OF SCIENCE & HUMANITIES

BASIC COMPUTER SKILLS & BASIC PROGRAMMING LANGUAGES CLASS (FOR BIOLOGY STUDENTS)

SYLLABUS

CHAPTER-1. Knowing computer: What is Computer, Basic Applications of Computer; Components of Computer System, Central Processing Unit (CPU), VDU, Keyboard and Mouse. Other input/output Devices, Computer Memory, Concepts of Hardware and Software; Concept of Computing, Data and Information; Applications of IECT; Connecting keyboard, mouse, monitor and printer to CPU and checking power supply.

CHAPTER-2. Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, language setting and thesaurus; Printing of word document.

CHAPTER-3. Making Small Presentation: Basics of presentation software; Creating Presentation; Preparation and Presentation of Slides; Slide Show; Taking printouts of presentation / handouts.




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DEPARTMENT OF SCIENCE & HUMANITIES SPECIAL COACHING CLASS FOR FIRST YEAR (2019-20) TIME TABLE

Period	1	2	3	4	5	6	7	8
Hour →	09:00 to 09:50	10:15 to 11:05	11:05 to 11:55	11:55 to 12:45	01:20 to 2:05	02:05 to 02:50	3:00 to 03:45	03:45 to 04:30
	MAT A.K	BREAK	ENG K.K	CS V.S	ENG KK	MAT A.K	CS V.S	MAT A.K
13.08.2019	MAT A.K	BREAK	ENG K.K	CS V.S	ENG KK	MAT A.K	CS V.S	MAT A.K
14.08.2019	CS V.S	ENG K.K	CS V.S	MAT A.K	ENG K.K	MAT A.K	CS V.S	MAT A.K
16.08.2019	MAT A.K	CS V.S	CS V.S	MAT A.K	ENG K.K	CS V.S	ENG K.K	ENG K.K
				LUNCH			BREAK	

Subject Name	Faculty
Basic Mathematical Skills And Aptitude	Mrs. A. Kanimozhi A.K
Development Of Literacy & Communication Skills	Mrs. K. Kavitha K. K
Basics of Computer Science & Presentation Skills	Mrs. V. Sujitha V.S


TIME TABLE INCHARGE
 (A.KANIMOZHI)
 ASP/MATHS


HOD


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DEPARTMENT OF SCIENCE & HUMANITIES

DEVELOPMENT OF LITERACY AND COMMUNICATION SKILLS

STUDENTS ATTENDANCE

Branch: CIVIL

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1	Jeevitha C	✓	✓	✓
2	Saranyadevi S	✓	✓	✓

Branch: CSE

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	Afran Nisha A	✓	✓	✓
2.	Akash T	✓	✓	✓
3.	Deva Dharshini N	✓	✓	✓
4.	Hari devagan M	✓	✓	✓
5.	Hifaya Thaqfeen M	✓	✓	✓
6.	Indhumathi V	✓	✓	✓
7.	Kabaleeshwari A	✓	✓	✓
8.	Mangala Dharshini R	✓	✓	✓
9.	Monica R	✓	✓	✓
10.	Naveen Kumar S	✓	✓	✓

Branch: ECE

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	Afrin Shifana A	✓	✓	✓
2.	Amizhtha B	✓	✓	✓
3.	Balaji M (2002)	✓	✓	✓
4.	Christiya I	✓	✓	✓
5.	Devisri S	✓	✓	✓
6.	Dhathvetha S	✓	✓	✓
7.	Divyadharshini S	✓	✓	✓
8.	Harishwar S	✓	✓	✓
9.	Joseph Rumsbil R	✓	✓	✓
10.	Jyothika B	✓	✓	✓
11.	Karunya J.S	✓	✓	✓
12.	Keerthi M	✓	✓	✓
13.	Kishore Krishna J	✓	✓	✓
14.	Mohammed Asif M	✓	✓	✓
15.	Muthuranjani V	✓	✓	✓
16.	Nagavishwa G	✓	✓	✓



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17.	Nalina shree N	✓	✓	✓
18.	Nandhakumar G	✓	✓	✓
19.	Porkodi S	✓	✓	✓
20.	Sham Hiruthick R	✓	✓	✓
21.	Thambidurai P K	✓	✓	✓
22.	Venkatesh P	a	✓	✓
23.	Vikram S	✓	✓	✓

Branch: EEE

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	Ahamed afzar A	✓	✓	✓
2.	Lokeshwaran N	✓	✓	✓
3.	Pitchiyatha D	✓	✓	✓
4.	Poorna Kumar V	✓	✓	✓

Branch: MECHANICAL

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	Aswin balaji S	✓	a	✓
2.	Ayyam perumal P	✓	✓	✓
3.	Dinesh Pandi B	✓	✓	✓
4.	Mohammed Siddiq A	✓	✓	✓
5.	Mohana Ragul P	✓	✓	✓
6.	Payavula Sai prasad	✓	✓	✓
7.	Saravanakumar M	✓	✓	✓
8.	Shobana K	✓	✓	✓
9.	Velpackiyaraj M	✓	✓	✓

[Signature]

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DEPARTMENT OF SCIENCE & HUMANITIES

BASICS OF COMPUTER SCIENCE & PRESENTATION SKILLS

STUDENTS ATTENDANCE

Branch: CIVIL

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1	Jeevitha C	/	/	/
2	Saranyadevi S	/	/	/

Branch: CSE

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	AfranNisha A	a	/	/
2.	Akash T	/	/	/
3.	Deva Dharshini N	/	/	/
4.	Haridevagan M	/	/	/
5.	HifayaThaqfeen M	/	/	/
6.	Indhumathi V	/	/	/
7.	Kabaleeshwari A	/	/	/
8.	MangalaDharshini R	/	/	/
9.	Monica R	/	/	/
10.	Naveen Kumar S	/	/	/

Branch: ECE

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	Afrin Shifana A	/	/	/
2.	Amizhtha B	/	/	a
3.	Balaji M (2002)	/	/	/
4.	Christiya I	/	/	/
5.	Devisri S	/	/	/
6.	Dhathvetha S	/	/	/
7.	Divyadharshini S	/	/	/
8.	Harishwar S	/	/	/
9.	Joseph Rumsbil R	/	/	/
10.	Jyothika B	/	/	/
11.	Karunya J.S	/	/	/
12.	Keerthi M	/	/	/
13.	Kishore Krishna J	/	/	/
14.	Mohammed Asif M	/	a	/
15.	Muthuranjani V	/	/	/
16.	Nagavishwa G	/	/	/





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17.	Nalinashree N	/	/	/
18.	Nandhakumar G	/	/	/
19.	Porkodi S	/	/	/
20.	Sham Hiruthick R	/	/	/
21.	Thambidurai P K	/	/	/
22.	Venkatesh P	a	/	/
23.	Vikram S	/	/	/

Branch: EEE

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	Ahamedafzar A	/	/	/
2.	Lokeshwaran N	/	/	/
3.	Pitchiyatha D	/	/	/
4.	Poorna Kumar V	/	/	/

Branch: MECHANICAL

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	Aswinbalaji S	/	a	/
2.	Ayyamperumal P	/	/	/
3.	Dinesh Pandi B	/	/	/
4.	Mohammed Siddiq A	/	/	/
5.	MohanaRagul P	/	/	/
6.	PayavulaSaiprasad	/	/	/
7.	Saravanakumar M	/	/	/
8.	Shobana K	/	/	/
9.	Velpackiyaraj M	/	/	/

V. Sujitha
FACULTY IN-CHARGE

[V. SUJITHA, AP/CSE]

M. J.
HOD

[Signature]
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DEPARTMENT OF SCIENCE & HUMANITIES

BASIC MATHEMATICAL SKILLS AND APTITUDE

STUDENTS ATTENDANCE

Branch: CIVIL

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1	Jeevitha C	/	/	/
2	Saranyadevi S	/	/	/

Branch: CSE

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	Afran Nisha A	a	/	/
2.	Akash T	/	/	/
3.	Deva Dharshini N	/	/	/
4.	Hari devagan M	/	/	/
5.	Hifaya Thaqfeen M	/	/	/
6.	Indhumathi V	/	/	/
7.	Kabaleeshwari A	/	/	/
8.	Mangala Dharshini R	/	/	/
9.	Monica R	/	/	/
10.	Naveen Kumar S	/	/	/

Branch: ECE

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	Afrin Shifana A	/	/	a
2.	Amizhtha B	/	/	/
3.	Balaji M (2002)	/	/	/
4.	Christiya I	/	/	/
5.	Devisri S	/	/	/
6.	Dhathvetha S	/	/	/
7.	Divyadarshini S	/	/	/
8.	Harishwar S	/	/	/
9.	Joseph Rumsbil R	/	/	/
10.	Jyothika B	/	/	/
11.	Karunya J.S	/	/	/
12.	Keerthi M	/	/	/
13.	Kishore Krishna J	/	/	/
14.	Mohammed Asif M	/	a	/
15.	Muthuranjani V	/	/	/





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16.	Nagavishwa G	/	/	/
17.	Nalina shree N	/	/	/
18.	Nandhakumar G	/	/	/
19.	Porkodi S	/	/	/
20.	Sham Hiruthick R	/	/	/
21.	Thambidurai P K	/	/	/
22.	Venkatesh P	/	/	/
23.	Vikram S	/	/	/

Branch: EEE

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	Ahamed afzar A	/	/	/
2.	Lokeshwaran N	/	/	/
3.	Pitchiyatha D	/	/	/
4.	Poorna Kumar V	/	/	/

Branch: MECHANICAL

S. No	Name of the Student	13.08.2019	14.08.2019	16.08.2019
1.	Aswin balaji S	/	/	/
2.	Ayyam perumal P	/	/	/
3.	Dinesh Pandi B	/	/	/
4.	Mohammed Siddiq A	/	/	/
5.	Mohana Ragul P	/	/	/
6.	Payavula Sai prasad	/	/	/
7.	Saravanakumar M	/	/	/
8.	Shobana K	/	/	/
9.	Velpackiyaraj M	/	/	/

FACULTY IN-CHARGE

(A. KANIMOLU
AP/MATE)

HOD

PRINCIPAL

Principal

N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401





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DEPARTMENT OF SCIENCE & HUMANITIES SPECIAL COACHING CLASS FOR FIRST YEAR STUDENTS FEEDBACK

Name of the Student : S. SARANYADEVI

Year/Sem/Department : I / I / CIVIL

Date: 16/8/19

1. Rate your Knowledge level before you taking this course?

Below Average	Average	Above Average
✓		

2. How do you feel the improvement of your knowledge or skills after taking the course?

Below Average	Average	Above Average
	✓	

3. How would you rate your overall learning experience?

Excellent	Good	Satisfactory
✓		

4. Are you satisfied with course Duration & Timings? Yes
Yes or No

5. Do you feel that this course training is more effective? Yes
Yes or No

6. Name the topics you enjoyed the most in this course.

Mathematics : Differentiation

Computer Skills : Excell

Communication Skills : Interaction section

7. Is the Content of the course useful for your further studies? Yes
Yes or No

8. Rate the content Delivery of the Course by the Staff?

Excellent	Good	Satisfactory
✓		

9. Any other specific topic do you want to learn? Integration

10. Do you prefer more lecture hours? Yes



S. Saranyadevi
Student's Signature



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DEPARTMENT OF SCIENCE & HUMANITIES SPECIAL COACHING CLASS FOR FIRST YEAR (2019-20) TIME TABLE

Period	1	2	3	4	5	6	7	8
Hour →	09.00 to 09:50	10.15 to 11.05	11.05 to 11.55	11.55 to 12.45	01.20 to 2.05	02.05 to 02.50	3.01 to 03.45	03.46 to 04.30
13.08.2019	MAT S.K	BREAK		MAT S.K	LUNCH		BREAK	
14.08.2019	ENG S.S	CS J.B	CS J.B	CS J.B	ENG S.S	ENG S.S	MAT S.K	MAT S.K
16.08.2019	MAT S.K	ENG S.S	ENG S.S	MAT S.K	ENG S.S	ENG S.S	CS J.B	CS J.B

Subject Name	Faculty
Basic Mathematical Skills And Aptitude	Ms. S. Kanagalakshmi S.K
Development Of Literacy & Communication Skills	Ms. S. Suganya S. S
Basics of Computer Science & Presentation Skills	Ms. J. Barna J. B

*(A.K.A.N. MO2-H)
 ASP/MATHS)*

(Dr. T. Princy)
HOD



(Signature)
PRINCIPAL

Principal

J.P.R. College of Engineering & Technology
 Natham, Dindigul (DT) - 624 401

DEPARTMENT OF SCIENCE & HUMANITIES

BASICS OF COMPUTER SCIENCE & PRESENTATION SKILLS

STUTENTS ATTENDANCE

Branch: CIVIL

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Naveenraj S	/	/	/
2.	Sudharsan K	/	/	/

Branch: CSE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Bramma S	/	/	/
2.	Janani R	/	/	/
3.	Muthukumar P	/	/	/
4.	Poornima P	/	/	/
5.	Saranya R	/	/	/
6.	Sathya M	/	/	/
7.	Selvambigai N	/	/	/

BRANCH: ECE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Gayathri M	/	/	/
2.	Kamalesh K	/	/	/
3.	Muruganathan M	/	/	/
4.	Mythili M	/	/	/
5.	Pavithra N	/	/	/
6.	Prabhu C	/	/	/
7.	Prasanna D	/	/	/
8.	Rajesh S	/	/	/
9.	Tharun kumar M	/	/	/

Branch: EEE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Aravind kumar K	/	/	/
2.	Kasturi M	/	/	/
3.	Rajamurugan M	/	/	/
4.	Usha Devi C	/	/	/





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Branch: Mechanical

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Gowthaman M	✓	✓	✓
2.	Manikandan R	✓	✓	✓
3.	Mugeshwaran N	✓	✓	✓
4.	Muthusamy P	✓	✓	✓
5.	Ramkumar A	✓	✓	✓
6.	Ruban P	✓	✓	✓

J. Bama
FACULTY IN-CHARGE
(J. BAMA)
Ap/CSE

[Signature]
HOD

[Signature]
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Natham, Dindigul (Dt) - 624 401





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DEPARTMENT OF SCIENCE & HUMANITIES

DEVELOPMENT OF LITERACY AND COMMUNICATION SKILLS

STUDENTS ATTENDANCE

Branch: CIVIL

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Naveenraj S	/	/	/
2.	Sudharsan K	/	/	/

Branch: CSE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Bramma S	/	/	/
2.	Janani R	/	/	/
3.	Muthukumar P	/	/	/
4.	Poornima P	/	/	/
5.	Saranya R	/	/	/
6.	Sathya M	/	/	/
7.	Selvambigai N	/	/	/

BRANCH: ECE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Gayathri M	/	/	/
2.	Kamalesh K	/	/	/
3.	Muruganathan M	/	/	/
4.	Mythili M	/	/	/
5.	Pavithra N	/	/	/
6.	Prabhu C	/	/	/
7.	Prasanna D	/	/	/
8.	Rajesh S	/	/	a
9.	Tharun kumar M	/	/	/

Branch: EEE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Aravind kumar K	/	/	/
2.	Kasturi M	/	/	/
3.	Rajamurugan M	/	/	/
4.	Usha Devi C	/	/	/





NPR College of Engineering & Technology

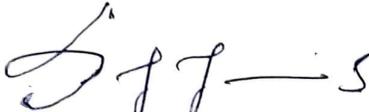
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Phone No: 04544- 246 500, 246501, 246502



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Branch: Mechanical

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Gowthaman M	/	/	/
2.	Manikandan R	/	/	/
3.	Mugeshwaran N	a	/	/
4.	Muthusamy P	/	/	/
5.	Ramkumar A	/	/	/
6.	Ruban P	/	/	/


FACULTY IN-CHARGE


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Natham, Dindigul (Tamil Nadu)





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DEPARTMENT OF SCIENCE & HUMANITIES SPECIAL COACHING CLASS FOR FIRST YEAR STUDENTS FEEDBACK

Name of the Student : N. Pavithra

Year/Sem/Department : I/I/ECE

Date: 16/8/19

1. Rate your Knowledge level before you taking this course?

Below Average	Average	Above Average
✓		

2. How do you feel the improvement of your knowledge or skills after taking the course?

Below Average	Average	Above Average
	✓	

3. How would you rate your overall learning experience?

Excellent	Good	Satisfactory
	✓	

4. Are you satisfied with course Duration & Timings?

Yes or No Yes

5. Do you feel that this course training is more effective?

Yes or No Yes

6. Name the topics you enjoyed the most in this course.

Mathematics : Integration
 Computer Skills : Excel
 Communication Skills : Verbal

7. Is the Content of the course useful for your further studies?

Yes or No Yes

8. Rate the content Delivery of the Course by the Staff?

Excellent	Good	Satisfactory
✓		

9. Any other specific topic do you want to learn? Differentiation.

10. Do you prefer more lecture hours? Yes

N. Pavithra
Student's Signature



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Website : www.nprcolleges.org, www.nprcet.org, Email:nprceprincipal@nprcolleges.org



DEPARTMENT OF SCIENCE & HUMANITIES SPECIAL COACHING CLASS FOR FIRST YEAR (2019-20) TIME TABLE

Period	1	2	3	4	5	6	7	8
Hour →	09.00 to 09:50	10.15 to 11.05	11.05 to 11.55	11.55 to 12.45	01.20 to 2.05	02.05 to 02.50	3.01 to 03.45	03.46 to 04.30
13.08.2019	MAT R.MK	MAT R.MK	CS J. PM	LUNCH	ENG R.S	BREAK	MAT R.MK	
14.08.2019	CS J. PM	CS J. PM	ENG R.S		R.MK		J. PM	
16.08.2019	ENG R.S	ENG R.S	CS J. PM		MAT R.MK		ENG R.S	

Subject Name	Faculty
Basic Mathematical Skills And Aptitude	Mrs. R. Muthukumari R MK
Development Of Literacy & Communication Skills	Ms. R. Sindhu R S
Basics of Computer Science & Presentation Skills	Mrs. J. Prisca Mary J.PM

TIME TABLE INCHARGE
(A.KANIMATHAS)
Asst. MATHS

M.R.S
HOD

PRINCIPAL



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P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401

DEPARTMENT OF SCIENCE & HUMANITIES
BASIC MATHEMATICAL SKILLS AND APTITUDE
STUDENTS ATTENDANCE

Branch: CIVIL

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Naveenraj S	/	/	/
2.	Sudharsan K	/	/	/

Branch: CSE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Bramma S	/	/	/
2.	Janani R	/	/	/
3.	Muthukumar P	/	/	/
4.	Poornima P	/	/	/
5.	Saranya R	/	/	/
6.	Sathya M	/	/	/
7.	Selvambigai N	/	/	/

BRANCH: ECE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Gayathri M	/	/	/
2.	Kamalesh K	/	/	/
3.	Muruganathan M	/	/	/
4.	Mythili M	/	/	/
5.	Pavithra N	/	/	/
6.	Prabhu C	/	/	/
7.	Prasanna D	/	/	/
8.	Rajesh S	/	/	/
9.	Tharun kumar M	/	/	/

Branch: EEE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Aravind kumar K	/	/	/
2.	Kasturi M	/	/	/
3.	Rajamurugan M	/	/	/
4.	Usha Devi C	/	/	/



Branch: Mechanical

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Gowthaman M	/	/	/
2.	Manikandan R	/	/	/
3.	Mugeshwaran N	a	/	/
4.	Muthusamy P	/	/	/
5.	Ramkumar A	/	/	/
6.	Ruban P	/	/	/


FACULTY IN-CHARGE
 (S. KANAGALAKSHMI)
 AP/ MATHS


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 Natham, Dindigul (Dt) - 624 401



DEPARTMENT OF SCIENCE & HUMANITIES

DEVELOPMENT OF LITERACY AND COMMUNICATION SKILLS

STUDENTS ATTENDANCE

Branch: CIVIL

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Sanjay. K	/	/	/
2.	Venkatesan. R	/	/	/

Branch: CSE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Abdul Jaleel S	/	/	/
2.	Ajay Kumar M	/	/	/
3.	Gunasekar J	/	/	/
4.	Manoj Kumar T	/	/	a
5.	Praveen T	/	a	/
6.	Soundarya V	/	/	/
7.	Surya K	/	/	/
8.	Thirunavukkarsar T	/	/	/
9.	Vaishali S	/	/	/

Branch: ECE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Aburor Ahamed K	/	/	/
2.	Aravindraaj. K	/	/	/
3.	Danalakshmi P	/	/	/
4.	Divesh V	/	/	/
5.	Kirthick N	/	/	/
6.	Krishnakumar P	/	/	/
7.	Madumitha P	/	/	/
8.	Mohan S	/	/	/
9.	Mohanbabu B	/	/	/
10.	Nagavishwa G	/	/	/
11.	Ram Vignesh RP	/	/	/
12.	Sharan S	/	/	/
13.	Sanonisha N	/	/	a
14.	Saran G.V	/	/	/
15.	Soundarya S	/	/	/
16.	Yashica. S	/	/	/

Branch: EEE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Muthupandi M	✓	✓	✓
2.	Pratap Kannan B	✓	✓	✓
3.	Rajasekar M	✓	✓	✓
4.	Vignesh M	✓	✓	✓

Branch: Mechanical

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Abilash. A	✓	✓	✓
2.	Adhityaraj. V. I	✓	✓	✓
3.	Bala Kumaresan. S	✓	✓	✓
4.	Harrish. M	✓	✓	✓
5.	Meenakshi Sundaram. G	✓	✓	✓
6.	Naveen Raj. K	✓	✓	✓
7.	Nitheswar. M	✓	✓	✓
8.	Ramakrishnan. B	✓	✓	✓
9.	Ramanan. M	✓	✓	✓
10.	Sangaran. S	✓	✓	✓
11.	Sivakumar . S	✓	✓	✓

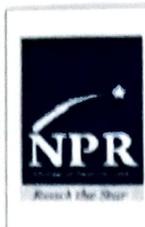

FACULTY IN-CHARGE


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 Natham, Dindigul (Dt) - 624 401





DEPARTMENT OF SCIENCE & HUMANITIES
BASIC MATHEMATICAL SKILLS AND APTITUDE
STUDENTS ATTENDANCE

Branch: CIVIL

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Sanjay. K	/	/	/
2.	Venkatesan. R	/	/	/

Branch: CSE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Abdul Jaleel S	/	/	/
2.	Ajay Kumar M	/	/	/
3.	Gunasekar J	/	/	/
4.	Manoj Kumar T	/	/	a
5.	Praveen T	/	a	/
6.	Soundarya V	/	/	/
7.	Surya K	/	/	/
8.	Thirunavukkarsar T	/	/	/
9.	Vaishali S	/	/	/

Branch: ECE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Aburor Ahamed K	/	/	/
2.	Aravindraj. K	/	/	/
3.	Danalakshmi P	/	/	/
4.	Divesh V	/	/	/
5.	Kirthick N	/	/	/
6.	Krishnakumar P	/	/	/
7.	Madumitha P	/	/	/
8.	Mohan S	/	/	/
9.	Mohanbabu B	/	/	/
10.	Nagavishwa G	/	/	/
11.	Ram Vignesh RP	/	/	/
12.	Sharan S	/	/	/
13.	Sanonisha N	/	/	/
14.	Saran G.V	/	/	a
15.	Soundarya S	/	/	/
16.	Yashica. S	/	/	/





Branch: EEE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Muthupandi M	/	/	/
2.	Pratap Kannan B	/	/	/
3.	Rajasekar M	/	/	/
4.	Vignesh M	/	/	/

Branch: Mechanical

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Abilash. A	/	/	/
2.	Adhityaraj. V. I	/	/	/
3.	Bala Kumaresan. S	/	/	/
4.	Harrish. M	/	/	/
5.	Meenakshi Sundaram. G	/	/	/
6.	Naveen Raj. K	/	/	/
7.	Nitheswar. M	/	/	/
8.	Ramakrishnan. B	/	/	/
9.	Ramanan. M	/	/	/
10.	Sangan. S	/	a	/
11.	Sivakumar . S	/	/	/


FACULTY IN-CHARGE
(R. MUTHUKUMARI, AP/monthly)


HOD


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Natham, Dindigul (Dt) - 624 401.





DEPARTMENT OF SCIENCE & HUMANITIES

BASICS OF COMPUTER SCIENCE & PRESENTATION SKILLS

STUDENTS ATTENDANCE

Branch: CIVIL

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Sanjay K	/	/	/
2.	Venkatesan R	/	/	/

Branch: CSE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Abdul Jaleel S	/	/	/
2.	Ajay Kumar M	/	/	/
3.	Gunasekar J	/	/	/
4.	Manoj Kumar T	/	/	/
5.	Praveen T	/	/	/
6.	Soundarya V	/	/	/
7.	Surya K	/	/	/
8.	Thirunavukkarsar T	/	/	/
9.	Vaishali S	/	/	/

Branch: ECE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Aburor Ahamed K	/	/	/
2.	Aravindraj K	/	/	/
3.	Danalakshmi P	/	/	/
4.	Divesh V	/	/	/
5.	Kirthick N	/	/	/
6.	Krishnakumar P	/	/	/
7.	Madumitha P	/	/	/
8.	Mohan S	/	/	/
9.	Mohambabu B	/	/	/
10.	Nagavishwa G	/	/	/
11.	Ram Vignesh RP	/	/	/
12.	Sharan S	/	/	/
13.	Sanonisha N	/	/	/
14.	Saran G.V	/	/	/
15.	Soundarya S	/	/	/
16.	Yashica S	/	/	/



Branch: EEE

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Muthupandi M	/	/	/
2.	Pratap Kannan B	/	/	/
3.	Rajasekar M	/	/	/
4.	Vignesh M	/	/	/

Branch: Mechanical

S.No	Name	13.08.2019	14.08.2019	16.08.2019
1.	Abilash. A	/	/	/
2.	Adhityaraj. V. I	/	/	/
3.	Bala Kumaresan. S	/	/	/
4.	Harrish. M	/	/	/
5.	Meenakshi Sundaram. G	/	/	/
6.	Naveen Raj. K	/	/	/
7.	Nitheswar. M	/	/	/
8.	Ramakrishnan. B	/	/	/
9.	Ramanan. M	/	/	/
10.	Sangaran. S	/	a	/
11.	Sivakumar . S	/	/	/

J.P.

FACULTY IN-CHARGE

[J. PRISCILLA MARY]
APICB

M.Y.

HOD

[Signature]

PRINCIPAL

Principal
P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624 401.





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DEPARTMENT OF SCIENCE & HUMANITIES SPECIAL COACHING CLASS FOR FIRST YEAR STUDENTS FEEDBACK

Name of the Student : A. ABIRASHI

Year/Sem/Department : I / 2 / M E C H

Date: 16/8/19

1. Rate your Knowledge level before you taking this course?

Below Average	Average	Above Average
	✓	

2. How do you feel the improvement of your knowledge or skills after taking the course?

Below Average	Average	Above Average
✗		✓

3. How would you rate your overall learning experience?

Excellent	Good	Satisfactory
✓		

4. Are you satisfied with course Duration & Timings?
Yes or No Yes

5. Do you feel that this course training is more effective?
Yes or No Yes

6. Name the topics you enjoyed the most in this course.

Mathematics : Differentiation

Computer Skills : MS-Word

Communication Skills : GD

7. Is the Content of the course useful for your further studies?
Yes or No Yes

8. Rate the content Delivery of the Course by the Staff?

Excellent	Good	Satisfactory
	✓	

9. Any other specific topic do you want to learn? Integration

10. Do you prefer more lecture hours? Yes



A. Abirashi
Student's Signature



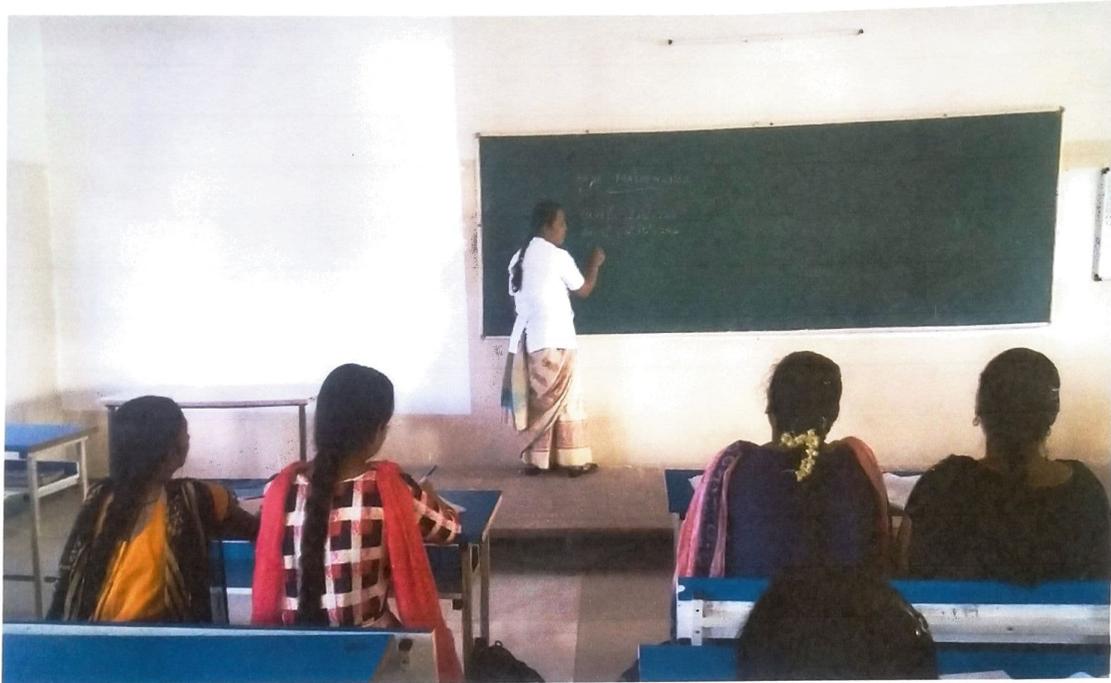
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DEPARTMENT OF SCIENCE & HUMANITIES CATEGORIZATION OF NEW BUDDING ENGINEERS SPECIAL COACHING CLASSES



BASIC MATHEMATICAL SKILLS AND APTITUDE





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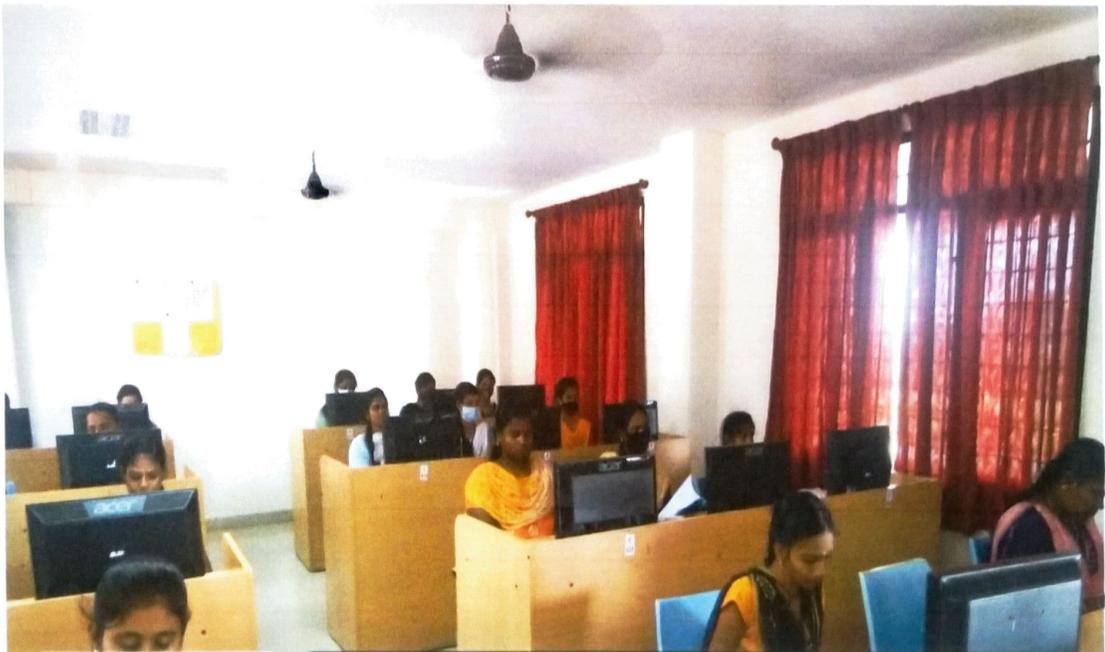
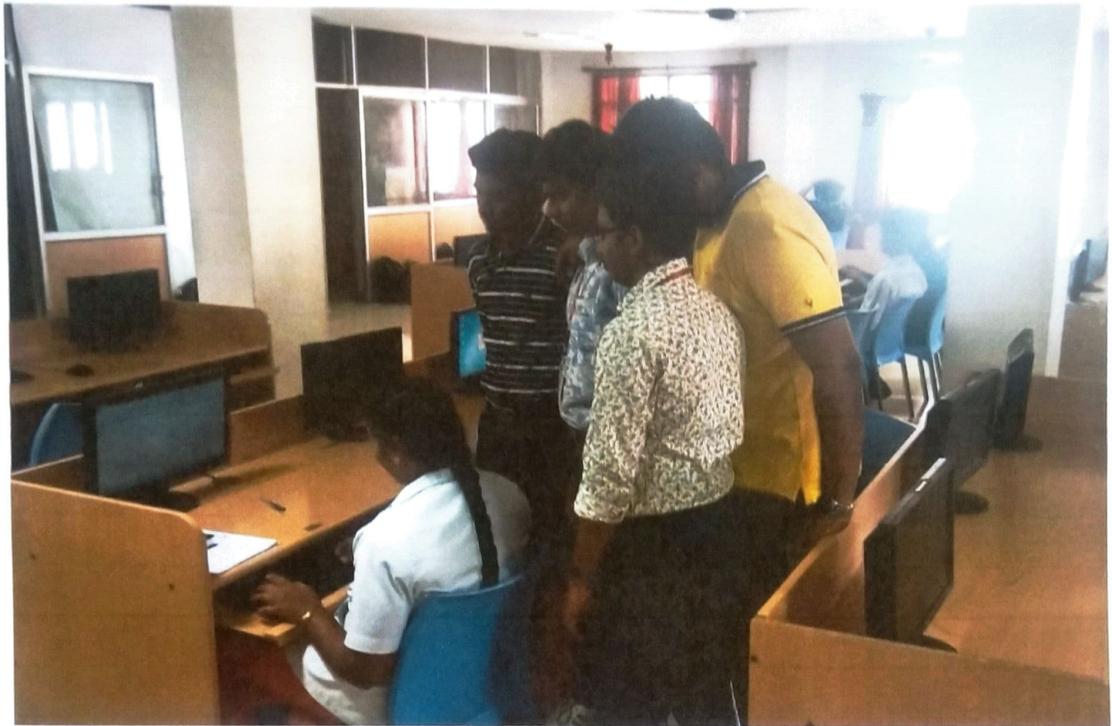
DEPARTMENT OF SCIENCE & HUMANITIES CATEGORIZATION OF NEW BUDDING ENGINEERS SPECIAL COACHING CLASSES



DEVELOPMENT OF LITERACY AND COMMUNICATION SKILLS

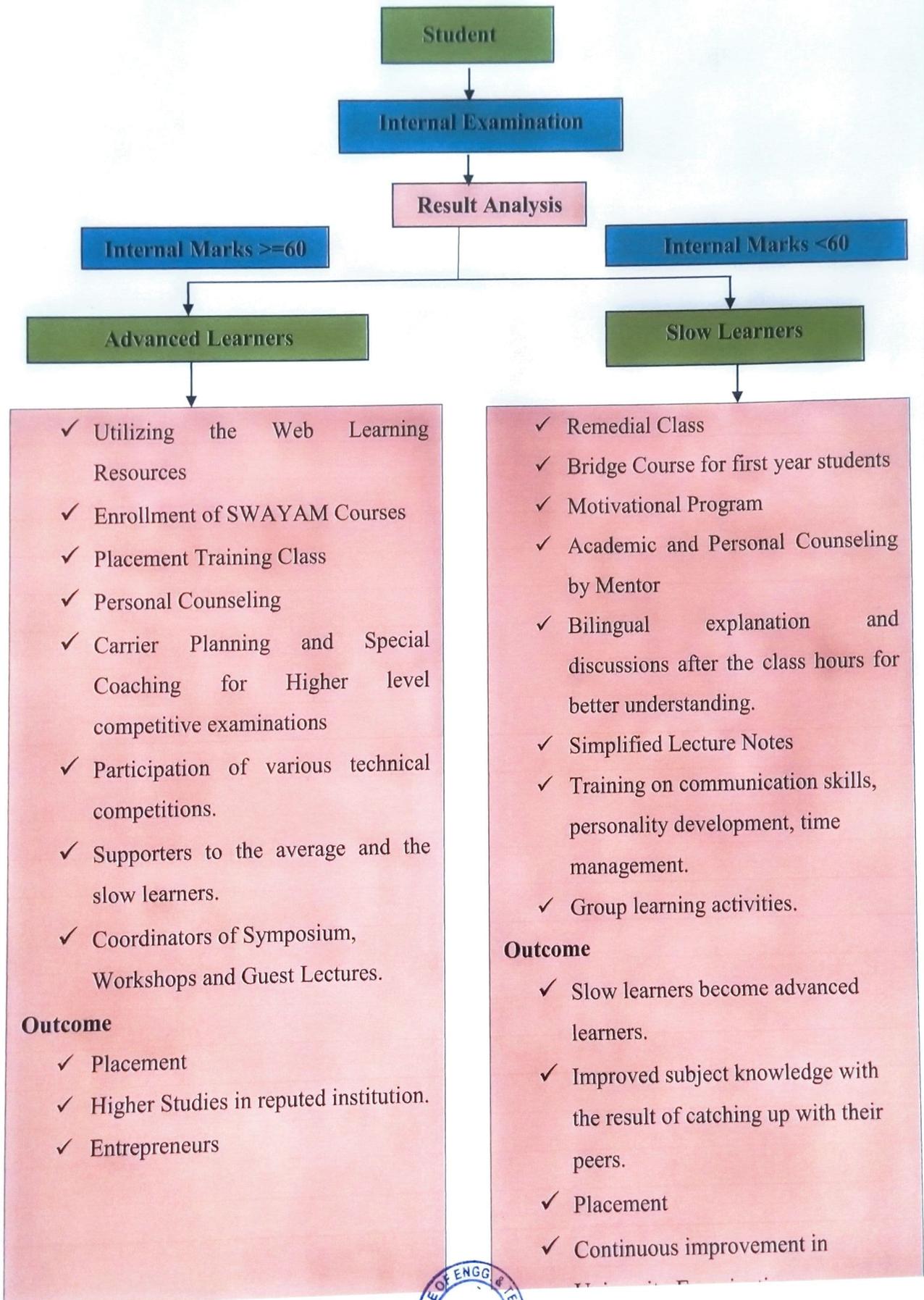


DEPARTMENT OF SCIENCE & HUMANITIES
CATEGORIZATION OF NEW BUDDING ENGINEERS
SPECIAL COACHING CLASSES



BASICS OF COMPUTER SKILLS & PRESENTATION SKILLS

INSTITUTION ASSESSMENT LEARNING LEVEL



Ref: NPRCET/CSE/REMEDIAL/2019-2020

Date : 06.08.2019

CIRCULAR

This is to inform that, Remedial Classes will be conducted for the slow learners of II, III and IV Year of Computer Science and Engineering Students to improve their learning skills and academic performance. The Slow learners were identified based on the performance of the First Internal Test. The Students concerned are advised to attend the remedial classes from 13.08.2019 onwards at 4.30 pm to 5.30 pm. The Remedial Class Schedule will be displayed in the department Notice board.


HOD / CSE



Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
NPR Nagar, Natham, Dindigul - 624401

Copy to

1. The Principal
2. Office
3. Department Notice Board
4. II,III and IV Year CSE Classroom



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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2019-2020

REMEDIAL CLASS TIMETABLE FOR SLOW LEARNERS

Year / Sem : IV/VII

Batch : 2016-2020

Venue : IV CSE Classroom

Time: 4.30 P.M to 5.30 P.M

Date	Subject Name	Faculty Name
13.08.2019	CS6701 - Cryptography and Network Security	Mr.J.Viswanath
14.08.2019	CS6702 - Graph Theory and Applications	Mrs.A.Kanimozhi
16.08.2019	CS6703 - Grid and Cloud Computing	Mrs.J.Bama
17.08.2019	CS6704 -Resource Management Techniques	Mr. Vijaya Narayanan
19.08.2019	IT6801 - Service Oriented Architecture	Mrs.C.Kalpana
20.08.2019	CS6007 - Information Retrieval	Mrs.R.Ramya

Timetable In-Charge



HoD

Head of the Department
Department of Computer Science & Engineering
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2019-2020

NAMelist FOR ADVANCED LEARNERS

IT6801 – SERVICE ORIENTED ARCHITECTURE

S.No	Register Number	Name of the Student
1.	920816104001	ABIRAMI M
2.	920816104002	ARUNA DEVI P
3.	920816104008	DIVYA A
4.	920816104009	DURGADEVI P
5.	920816104010	GOMATHI AKILA D
6.	920816104012	HARI VIGNESH S
7.	920816104013	ILAMATHI G
8.	920816104017	KEERTHANA M
9.	920816104019	MADHUMITHA A
10.	920816104020	MAHALAKSHMI M
11.	920816104023	NANDHINI S
12.	920816104024	PAVITHRAN M
13.	920816104027	PREETHA B
14.	920816104028	PREETHA T
15.	920816104029	SABARI KRISHNAN S K
16.	920816104031	SELVANAYAKI C
17.	920816104032	SENTHIL N P
18.	920816104033	SHREEDHAR V
19.	920816104034	SHRI JANANI S
20.	920816104035	SHRUTHI M
21.	920816104036	SIVASUBRAMANIAN C
22.	920816104039	SRIPRIYA P
23.	920816104040	SUNDARAM S K K
24.	920816104043	TAMILSELVAN M
25.	920816104301	SHARUKKHAN S
26.	920816104901	NAVRIN BHAJILA A


Faculty In-Charge




HoD
Head of the Department
Department of Computer Science & Engineering
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2019-2020

NAMELIST FOR SLOW LEARNERS

IT6801 – SERVICE ORIENTED ARCHITECTURE

Year / Sem : IV/VII

Batch : 2016-2020

S.No	Register Number	Name of the Student
1.	920816104003	ASHWIN SARAVANAN RC
2.	920816104004	BALAJI J
3.	920816104005	BALAJI RM
4.	920816104006	CHARUMATHY B
5.	920816104011	GURU PRASATH S
6.	920816104014	KANNAN B
7.	920816104015	KARTHICK RAJA T
8.	920816104016	KARTHIGA S
9.	920816104018	MADHAN N
10.	920816104021	MOINUDEEN S
11.	920816104022	MUTHU T
12.	920816104025	PRASATH T
13.	920816104026	PRAVIN VINO M
14.	920816104030	SANTHOSH KUMAR A
15.	920816104038	SRINITHI P
16.	920816104041	SURYA S
17.	920816104042	SWETHA A
18.	920816104044	YOGESH JOHN
19.	920816104701	KISHORE KUMAR D


Faculty In-Charge




HoD
Head of the Department
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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2019-2020

ATTENDANCE FOR SLOW LEARNERS

IT6801 – SERVICE ORIENTED ARCHITECTURE

Year / Sem : IV/VII

Batch : 2016-2020

S.No	Register Number	Name of the Student	19/8/19	22/8/19	6/9/19	12/9/19	25/9/19	3/10/19	12/10/19
1.	920816104003	ASHWIN SARAVANAN R C	a	/	/	a	/	/	/
2.	920816104004	BALAJI J	/	/	/	a	/	/	/
3.	920816104005	BALAJI RM	a	/	/	a	/	a	a
4.	920816104006	CHARUMATHY B	a	/	/	a	a	a	a
5.	920816104011	GURU PRASATH S	/	/	/	a	/	/	/
6.	920816104014	KANNAN B	/	/	/	a	/	/	/
7.	920816104015	KARTHICK RAJA T	/	/	/	/	a	/	/
8.	920816104016	KARTHIGA S	/	a	/	a	/	/	/
9.	920816104018	MADHAN N	/	a	/	a	/	/	/
10.	920816104021	MOINUDEEN S	/	a	/	/	/	/	/
11.	920816104022	MUTHU T	/	/	/	a	/	/	/
12.	920816104025	PRASATH T	/	/	/	a	/	/	/
13.	920816104026	PRAVIN VINO M	/	a	/	/	/	/	/
14.	920816104030	SANTHOSH KUMAR A	/	/	/	a	/	/	/
15.	920816104038	SRINITHI P	/	/	/	a	/	/	/
16.	920816104041	SURYA S	a	/	/	a	/	/	a
17.	920816104042	SWETHA A	a	a	/	a	/	/	/
18.	920816104044	YOGESH JOHN	/	/	/	a	/	/	/
19.	920816104701	KISHORE KUMAR D	/	/	/	a	/	/	a





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DETAILS OF THE TOPIC COVERED

SI NO	Name of the Faculty	No of times subject handled	Signature of the Faculty
1	Mrs. C.Kalpana	1	
SI NO	TOPICS COVERED DURING COACHING CLASS		
1	Unit – 3 Characteristics of SOA & Client Server and Distributed Service Architecture		
2	Unit – 4 WSDL , Orchestration & Choreography		
3	Unit – 5 WS – BPEL, WS - Security		
4	Unit – 1 XML Document Structure & XML Schema		
5	Unit – 2 DOM & XSL Formatting		
6	Revision – Previous Year University Question Paper		
7	Revision – Previous Year University Question Paper		

Faculty In-Charge



HoD

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

REMEDIAL CLASSES & IMPLEMENTATION

PROGRAMME : COMPUTER SCIENCE

SEMESTER : VII

REMEDIAL CLASSES	
Subject	Service Oriented Architecture (IT6801/C405)
Class Involved	Semester 7
Faculty in-charge	Mrs.C.Kalpana
Reason for arranging the remedial Class	Weak students identified after Internal test 1
Contents to be Taught	Unit 3 & 4
Date and venue of the Class	19.08.2019 & IV-CSE-Class room
Faculty to ensure the Class Room is free and the teaching aids are arranged for the Class	Yes
Information to all Students of the Class	Yes
HOD To Ensure there are no other Classes for the students involved on this Date/Time	No other classes
Approved by HOD	

REMEDIAL CLASSES IMPLEMENTATION	
% Attendance of the REMEDIAL Class	74%
Attendance details is forwarded to HOD	Yes
Verification by HOD	





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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

REMEDIAL CLASSES & IMPLEMENTATION

PROGRAMME : COMPUTER SCIENCE

SEMESTER : VII

REMEDIAL CLASSES	
Subject	Service Oriented Architecture (IT6801/C405)
Class Involved	Semester 7
Faculty in-charge	Mrs.C.Kalpana
Reason for arranging the remedial Class	Weak students identified after Internal test 2
Contents to be Taught	Unit 5
Date and venue of the Class	25.09.2019 & IV-CSE-Class room
Faculty to ensure the Class Room is free and the teaching aids are arranged for the Class	Yes
Information to all Students of the Class	Yes
HOD To Ensure there are no other Classes for the students involved on this Date/Time	No other classes
Approved by HOD	

REMEDIAL CLASSES IMPLEMENTATION	
% Attendance of the REMEDIAL Class	89%
Attendance details is forwarded to HOD	Yes
Verification by HOD	





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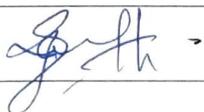
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

REMEDIAL CLASSES & IMPLEMENTATION

PROGRAMME : COMPUTER SCIENCE

SEMESTER : VII

REMEDIAL CLASSES	
Subject	Service Oriented Architecture (IT6801/C405)
Class Involved	Semester 7
Faculty in-charge	Mrs.C.Kalpana
Reason for arranging the remedial Class	Weak students identified after Internal test 2
Contents to be Taught	All Five Units (Previous Year University Question Paper)
Date and venue of the Class	12.10.2019 & IV-CSE-Class room
Faculty to ensure the Class Room is free and the teaching aids are arranged for the Class	Yes
Information to all Students of the Class	Yes
HOD To Ensure there are no other Classes for the students involved on this Date/Time	No other classes
Approved by HOD	

REMEDIAL CLASSES IMPLEMENTATION	
% Attendance of the REMEDIAL Class	79%
Attendance details is forwarded to HOD	Yes
Verification by HOD	





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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2019-2020

REMEDIAL CLASS ANALYSIS FOR SLOW LEARNERS

IT6801 – SERVICE ORIENTED ARCHITECTURE

Year / Sem : IV/VII

Batch : 2016-2020

Sl. No.	REGISTER NUMBER	NAME OF THE STUDENT	NUMBER OF HOURS TAKEN	UNIVERSITY RESULT	NUMBER OF STUDENT S PASSED & FAILED
1.	920816104003	ASHWIN SARAVANAN R C	6	U	Passed : 13 Failed : 6
2.	920816104004	BALAJI J	6	C	
3.	920816104005	BALAJI RM	6	E	
4.	920816104006	CHARUMATHY B	6	U	
5.	920816104011	GURU PRASATH S	6	E	
6.	920816104014	KANNAN B	6	E	
7.	920816104015	KARTHICK RAJA T	6	U	
8.	920816104016	KARTHIGA S	6	C	
9.	920816104018	MADHAN N	6	U	
10.	920816104021	MOINUDEEN S	6	D	
11.	920816104022	MUTHU T	6	E	
12.	920816104025	PRASATH T	6	D	
13.	920816104026	PRAVIN VINO M	6	D	
14.	920816104030	SANTHOSH KUMAR A	6	E	
15.	920816104038	SRINITHI P	6	B	
16.	920816104041	SURYA S	6	E	
17.	920816104042	SWETHA A	6	U	
18.	920816104044	YOGESH JOHN	6	D	
19.	920816104701	KISHORE KUMAR D	6	U	



[Signature]
Faculty In-Charge

[Signature]
HoD

Head of the Department
Department of Computer Science & Engineering
NPR College of Engineering & Technology
Natham, Dindigul (DT) - 624 401.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2019-2020

Year / Sem : IV/VII

Batch : 2016-2020

Subject Code & Name : IT6801 & Service Oriented Architecture



REMEDIAL CLASS FOR SLOW LEARNERS



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SAMPLE STUDY MATERIALS
(Notes, Two Marks Questions with
Answers, Important Questions & AU
Question Paper)



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PAGE NO: 1

UNIT: I

CLASS NO: 4

TITLE: UNIT-I INTRODUCTION TO XML

OBJECTIVE:

To learn about the XML fundamentals.

APPLICATIONS:

- * Airline Reservation webpage
- * Webpage Designing

UNIVERSITY QUESTIONS:

1) List out the advantages of XML over SGML.

[NOV/DEC '18]

2) Explain XML Document Structure [APR/MAY '17]

NOTES

3) Determine the Rules of XML document

Structure. [NOV/DEC '18]

4) What is XML?

[NOV/DEC '17]

SUBJECT

CODE : IT 6801

SUBJECT

: SERVICE ORIENTED

NAME

ARCHITECTURE

HANDLED BY :

Mrs. C. KALPANA

AP/CSE.

Dr. J. SUNDARARAJAN,
B.E., M.Tech., Ph.D.
Principal
N.P.R. College of Engineering & Technology
Natham, Dindigul (Dt) - 624401.

UNIT-I
INTRODUCTION TO XML

What is XML?

XML - Extensible Markup Language

* XML is a Subset of Standard Generalized Markup Language (SGML).

* SGML is called as "parent of other Markup languages".

* In XML, we can encode information in a text document.

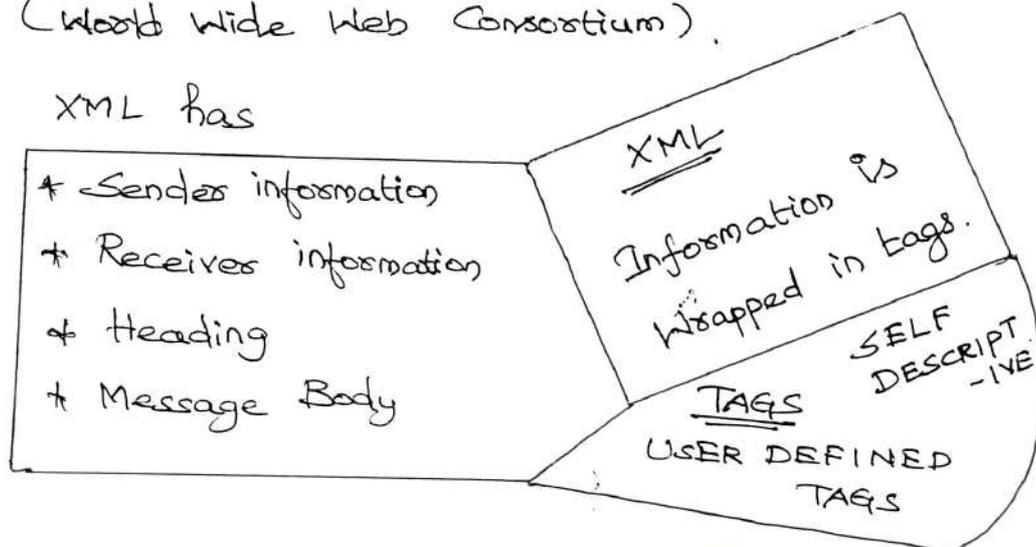
* Not only the data, here we can insert lot of information inside a document.

* It displays information in structured Manner.

* XML is a W3C Recommendation (World Wide Web Consortium).

XML has

- * Sender information
- * Receiver information
- * Heading
- * Message Body



STRUCTURE OF XML DOCUMENT

- * Top Element \Rightarrow Root (or) Document Element
- * Other Elements \Rightarrow Nested under the root.
- * Empty Elements \Rightarrow Donot contain any child elements.

Ex: Elements are,

Image files, Sounds files (or) Video files.

```
<?xml version="1.0"?> // Starting of XML document
<!DOCTYPE first [ // Document Name and type
<!ELEMENT first (#PCDATA) > // Element Defn & keyword
] > // End of the Document Type definition
```

```
<first> WELCOME
```

```
Your First XML document
```

```
</first>
```



DIFFERENCE BETWEEN HTML & XML

HTML	XML
i) Format and Display the same Data	i) Store (or) Transport Data.
ii) While Displaying data in HTML, We can't edit HTML files when the data changes.	ii) Data can be stored in Seperate XML files.

HTML	XML
iii) We don't have end tags for particular HTML tags.	iii) In XML, End tags are always present.
iv) Predefined Tags	iv) User defined Tags.
v) Extension \Rightarrow .html	v) Extension \Rightarrow .xml

Ex:

Books.xml

```

<? xml version = "1.0" encoding = "UTF-8" ?>
<bookstore>
  <book category = "cs" >
    <title language = "english" > Software Engineering
  </title>
  <year > 2009 </year>
  <price > 450.00 </price>
</book>
  <book category = "web programming" >
    <title language = "english" > Java Script
  </title>
  <year > 2019 </year>
  <price > 480.00 </price>
</book>
</bookstore>

```



Note (x)

* No close tag for XML Syntax.

+ XML \Rightarrow Case Sensitive

XML TREE

<root>

<child>

<subchild>... </subchild>

</child>

</root>

XML DOCUMENT STRUCTURE

It helps to develop well structured XML document, which we can easily send between systems and devices.

XML Document has,

i) XML Declaration

ii) Document Type Declaration

iii) Element Data

iv) Attribute Data

v) Character Data (or) XML Content

i) XML Declaration

* Declaration is the first part of XML document.

* It tells "What the document contains".

ii) XML Content (or) Information.

* It starts with <?xml... ?>



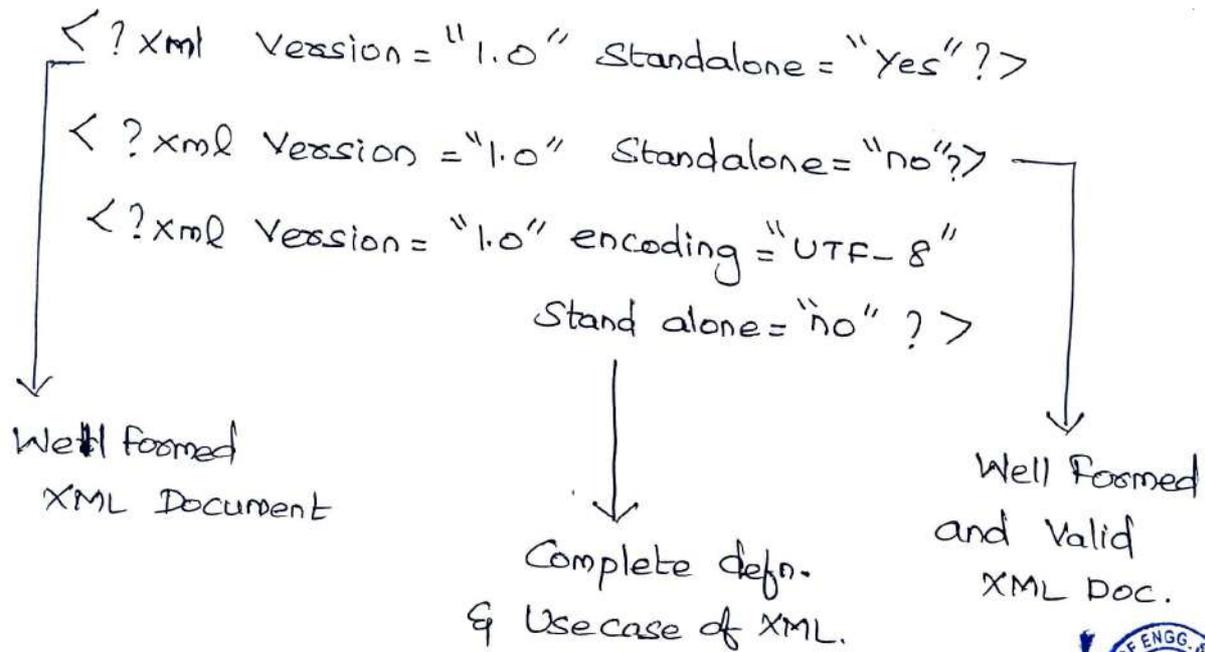
<?xml ⇒ Beginning of the processing instruction in XML.

Version = "xxx" ⇒ Ex: 1.0, 2.0... etc
↳ Internal DTD will be allowed

Standalone = "xxx" ⇒ Yes (or) No → External DTD Required
Internal DTD optional
(External Markup Declaration)

encoding = "xxx" ⇒ Default "US-ASCII"
Alternate "UTF-8"

Ex: UTF - Unicode Transformation Format



Version = "1.0", Encoding = "UTF-8" → External Markup Declarations,
1 to 4 bytes long
smaller than UTF-8

ii) Document Type Declaration

* DOCTYPE - Name of the XML Content

↳ provides guarantee to the document validity
↳ has specific link to Document Type Definition (DTD).

Name of Internal Content → root.

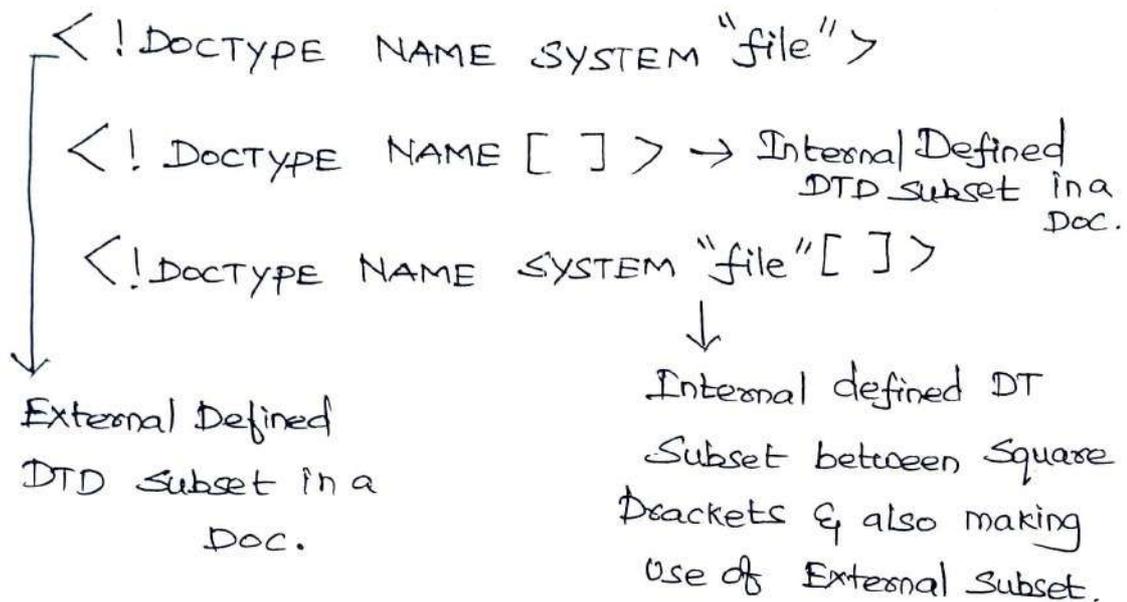


DOCTYPE - Document Type Declaration

DTD - Document Type Definition.

* DOCTYPE \Rightarrow To identify the Constraints on the Validity of document with reference to External and Internal DTD subset.

General Forms of Document Type Declaration



Ex: Book

$\langle !DOCTYPE book SYSTEM "book.dtd" \rangle$

Difference

Internal DTD \Rightarrow Content is inside square brackets

External DTD \Rightarrow Reference to .dtd Extension.



COMPONENTS DESCRIPTION

- < - Start of XML Tag
- !DOCTYPE - Beginning of Document Type Declaration
- NAME - Name of the Document
- SYSTEM - Identifiers will be Read & Processed.
- "file" - Name of the file to be processed by the System.
- [- Starts an Internal DTD Subset
-] - Ends the Internal DTD Subset
- > - End of XML Tags (os)
End of DOCTYPE

iii) MARKUP & CONTENT

* XML Document Composed of Markup and Content.

Types

Elements, Entity References, Comments, Processing instructions, Marked Sections and Document Type Declaration.

ELEMENTS

* Self closing Tags (os) Matched } XML Tags

* Unmatched Elements => Empty elements

11/11



" />" => Empty Tag &
No Matching End Tag.

Single XML element => Any number of child elements.

Depth of XML Tree => Any Number of Nodes.

XML Elements - Letters, Numbers, Other characters

But Names cannot start with numbers (or) Punctuation.

No > (or) >>, <=, < Symbols.

White space used to separate the elements.

iv) ATTRIBUTES

Name (or) Value pairs present within the Start Element.

That specify the text, strings & modify the context of the element.

Ex:

```
<price booksrate="250.00">  
</price>
```

Attributes { optional (Default Value)
Fixed Value => Specific Value



ENTITY REFERENCES

Entity - Unique name

* Defined in Entity Declaration of DTD (or)

XML Schema

* Entity References ⇒ Delimited by an ampersand (&) at beginning &

Ex: Semicolon at ending.

<

Ex: <math>e^2 + 2e + 1 = (e + 1)^2</math>

* Comments

Begins with <!... & ends with --->

Delimiters not used.

We can use literal string ---

Placed in anywhere in a document.

<!.. Welcome Everyone --->

* Processing Instructions ⇒ How the Content should be processed.

Syntax <? Instruction options?>

Ex: <?Send message "Process Complete"?>

* Masked CDATA SECTIONS

⇒ CDATA - Character Data

Large numbers of characters & text that an XML processor ignores and pass to an application.

SYNTAX <![CDATA[CONTENT]]>

↓
Directly pass to an application without any interpretation.



DOCUMENT TYPE DEFINITIONS

- * Defining XML Markup in a document.
 - * Well defined set of Rules for document Structure and Content.
 - * Validity of document.
- * XML CONTENT \Rightarrow Binary Data, Characters, Valid Unicode & International Characters

XML Content Models

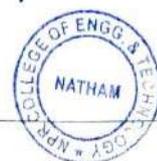
Open Content Model - Add Additional element & attributes to a document without explicitly declared in DTD (or) Schema.

Closed Content Model - Restricts elements and attributes to only those that are specified in the DTD (or) Schema.

Handling White Space in XML \Rightarrow character Spaces, Tabs, linefeeds & carriage returns in documents.

RULES OF XML STRUCTURE

- 1) All Elements Must have a closing Tag.
- 2) XML Tags are Case Sensitive
- 3) XML Elements Must have proper Nesting
- 4) Contains Single Root Element
- 5) Attribute Values must be quoted.



6) Attribute may only appear once in the same start tag.

EX: DTD

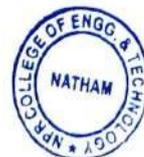
```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE note SYSTEM "Note.dtd">
<note>
  <sno>1 </sno>
  <name>xxx </name>
  <sub> SoA </sub>
</note>
```

Note.dtd

```
<!DOCTYPE note
[
  <!ELEMENT note (sno, name, sub)>
  <!ELEMENT sno (#PCDATA)>
]
>
```

Keywords

- + XML, HTML
- + Elements, Attributes
- + DOCTYPE, DTD
- + XML Rules.





TITLE: WELL FORMED AND VALID DOCUMENTS

OBJECTIVE:

To describe the Content present inside the XML document.

APPLICATIONS:

- * Microsoft office 2007
- * Pagelayout

UNIVERSITY QUESTIONS:

- 1) Explain types of DTD
- 2) Structure of Internal DTD
- 3) Structure of External DTD
- 4) Explain DTD Attributes & Elements.

NOTES



WELL FORMED XML DOCUMENTS

An XML document with correct syntax is called "Well formed"

A Document Type Definition allows the XML author to define the set of rules to make it valid. It is called valid documents.

DTD
 / Internal DTD (Inside the XML Doc.)
 \ External DTD (Referenced by Many Documents.)

Ex!

Internal DTD

```
<?xml version="1.0">  
<!DOCTYPE Message [  
  <!ELEMENT Message  
    (#PCDATA)>  
  ]>  
<Message>  
  Welcome to all  
</Message>
```

External DTD

```
<?xml version="1.0">  
<!DOCTYPE message  
  SYSTEM "message.dtd">  
<message>  
  Welcome to all  
</message>
```

STRUCTURE OF DTD

Document Type Declaration, Elements, Attributes, Entities, & Minor keywords.

SYNTAX

```
<!DOCTYPE root SYSTEM [Internal DTD] >
```



DTD Elements ⇒ Defines name and all allowed contents of an element.

* Starts with letter (or) Underscore &
Combination of numbers, underscore, dashes & periods.

SYNTAX

<! ELEMENT element name rule >

DTD Element Rules / Deals with Content
 \ Deals with Structure

Content Rule ⇒ Any rule, EMPTY Rule & #PCDATA Rule

[! ELEMENT element Name ANY >

<! ELEMENT elementname EMPTY >

<! ELEMENT element name (#PCDATA) >

Structure Rule ⇒ Element only Rule, Mixed Rule

[! ELEMENT element name (element 1, element 2) >

[! ELEMENT elementname (#PCDATA) child element 1 | child element 2)* >

Element Symbols

* , , () , | , + , ? , No-symbol.

DTD Attributes ⇒ Name/Value pairs to describe XML elements.

<image size="10" height="20" >
</image >



Attribute Types ⇒ CDATA, ENTITY, ENTITIES,
ID, IDREF, IDREFS, NMTOKEN,
NOTATION, ENUMERATED.

Default Values ⇒ #Required, #Implied,
#Fixed, Default.

DTD Entities ⇒ Storage Units

i.e., Type of information which can be handled easily.

SYNTAX

```
<!ENTITY entityname [SYSTEM | PUBLIC]  
entitycontent >
```

Keywords

- * DTD Structure
- + DTD Syntax & its Types
- + Rules of DTD





TITLE: NAMESPACES

OBJECTIVE:

To avoid Name Conflicts in XML Documents.

APPLICATIONS:

- * Web page Designing
- * Microsoft Word, Syntax Error in program.

UNIVERSITY QUESTIONS:

1) What is an XML Namespace?

Elaborate the different types of XML namespaces with an example for each.

NOTES

[NOV/DEC'17]

2) Determine the rules of XML document Structure.

ii) Demonstrate the need of Namespace in XML.

[NOV/DEC'18]



NAME SPACES

It provides a method of avoid element name conflicts.

Ex:

In XML, the elements name can be declared by user. Sometimes the names create conflicts.

i, Same name repeated again.

Ex:

```
<book> <table>
<tr> <td> SOA </td>
    <td> XML </td>
</tr> </table>
</book>
```

To avoid conflicts between the elements, we are using Namespace (By adding Prefix)

Ex:

```
<h:book>
  <h:table> <h:tr>
    <h:td> SOA </h:td>
    <h:td> XML </h:td>
  </h:tr>
</h:table> </h:book>
```



XML Namespaces - xmlns Attribute

Prefix must be defined.

SYNTAX

$\text{xmlns:prefix} = \text{"URI"}$.

Ex:

```
<book>
```

```
<h:table xmlns:h="http://www.123.com">
```

```
<h:tr>
```

```
<h:td>SOA </h:td>
```

```
<h:td>XML </h:td>
```

```
</h:tr>
```

```
</h:table>
```

for another table we can use f as extension

Ex:

```
<f:table xmlns:f="http://www.abc.com">
```

Where

URI - Uniform Resource Identifier

URL - Uniform Resource Locator

URN - Uniform Resource Name.



Name Space (in Real Usage)

XSLT \Rightarrow To Transform XML documents into other formats.

Keywords

- * Prefix (In Namespace)
- * Syntax of Namespace
- * URI, URL, URN.





TITLE: XML SCHEMA

OBJECTIVE:

To learn about the overall design of XML document.

APPLICATIONS:

* Face Book - Social Relationship Map.

UNIVERSITY QUESTIONS:

1) How XML Schema helps in Structuring an XML document? Explain XML Schema types with an example? [NOV/DEC '17]

NOTES

2) Outline the use of XSLT for document Publishing. Illustrate the process for Converting XML document to HTML document.

[NOV /DEC '18]



XML SCHEMA

XML SCHEMA

XML Based Alternative to DTD.

Solves number of problems in DTD.

SYNTAX

<xs:element name="book">

Ex: <xs:element name="book">

<xs:Complex type >

<xs:Sequence >

<xs:element name="to" type="xs:string"/>

<xs:element name="from" type="xs:string"/>

</xs:sequence >

</xs:Complex type >.

</xs:element >.



Note

XML Schemas are powerful than DTD
(Because it Support Datatypes, Namespace,
Extensible language written in XML).

Why we use XML Schema?

Because it has own description and
format.

Es Easy to Verify Data.

* We can Interchange data to different groups.

* XML Editors - Edit the Schema Files

* XML Passes - Parse your schema files.

* Transform your schemas with XSLT.

Declaring Elements

- Simple Element \Rightarrow No nested elements
- Complex Element.

\downarrow
Contains child elements

(or) Attributes Manytimes

(or) Nested Elements.

Ex: ~~SYMP~~

SIMPLE ELEMENT

```
<:xsd:SimpleType name="hai" >
  : <xsd:name="hi" >
  : </xsd:name >
</xsd:SimpleType >
```

} No Nested Elements.

Ex: COMPLEX ELEMENT

```
<xsd:ComplexType name="purchase order" >
  <xsd:attribute name="pi" >
  : <xsd Amount="20.0" >
  : </xsd Amount >
  </xsd >
  :
</xsd:ComplexType >
```

} Nested Elements



Keywords

- * Schema (Design of Database)
- * XML Schema (Design of XML Doc.)
- * Types & its elements with Example.





TITLE: XML FILES

OBJECTIVE:

To define XML Files, Formatting and XML Transformation (XSLT).

APPLICATIONS:

- * Yahoo Mail → Login
- * New Users Login

UNIVERSITY QUESTIONS:

- 1) What is XML Files?
- 2) Explain how to display XML files with Example.
3. Give any two Example programs for XML

NOTES

Files.



XML Files

* XML files help to demonstrate the formatting & XML Transformation (XSLT).

* We can use Javascript with XML (AJAX).

* XML file does not have any style information associated with it.

Ex: Document Tree

```
<book>
```

```
<chapter> 1 </chapter>
```

```
<heading> XML </heading>
```

```
</book>
```

XML File with Errors

(Displays opening & ending Tag mismatch)

XML Files

=> Can be viewed easily in all browsers.

Viewing XML Files (book.xml)

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<book>
```

```
<ch> 1 </ch>
```

```
<name> XML </name>
```

```
</book>
```



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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING ACADEMIC YEAR 2019-2020

TWO MARKS QUESTIONS WITH ANSWERS

Year / Sem: IV / VII

Subject Code / Name: IT6801 / Service Oriented Architecture

UNIT I INTRODUCTION TO XML

XML document structure – Well-formed and valid documents – Namespaces – DTD – XML Schema – X-Files.

UNIT-I / PART-A

1.	What is XML? (May 2017 & Nov 2017) eXtensible Markup Language (XML) is a way to markup a document for content. It is a standard for data interchange that is being used for B2B transactions. XML is designed for use with data-centric documents.
2.	What is XML Document Prolog? (Nov 2017) The prolog is an optional component of the XML document. If included, the prolog must be appearing before the root element. A prolog consists of two parts: the XML declaration and the Document Type Declaration (DTD).
3.	List some of the advantages of XML. <ul style="list-style-type: none">✓ Simplicity - XML files are human readable✓ Openness - Widespread industry support✓ Extensibility – There is no fixed set of tags. New tags can be created as they are needed.✓ Major relational databases have the capability to read and generate XML data✓ Large family of XML support technologies is available.
4.	What are the features of XML? <ul style="list-style-type: none">✓ XML is a markup language much like HTML✓ XML was designed to describe data. XML is a W3C Recommendation.✓ XML tags are not predefined. You must define your own tags✓ XML uses a Document Type Definition (DTD) or an XML Schema to describe the data✓ XML with a DTD or XML Schema is designed to be self-descriptive.
5.	Write the three revolutions of XML. Data revolution, Architectural revolution and Software revolution.
6.	What do you mean by XML document? eXtensible Markup Language (XML) is a markup language that defines a set of rules for encoding documents in a format which is both human-readable and machine-readable. These include vector graphics, e-commerce transactions, mathematical equations, object meta-data, server APIs, and a thousand other kinds of structured information.

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7.	<p>What is an XML element?</p> <p>XML elements identify the type of information that is placed within a specific section of the XML document. An XML element is everything from the element's start tag to the element's end tag. An element can contain: other elements, text, attributes or a mix of all of the above.</p>
8.	<p>Give the rules for well-formed documents in XML. (Nov 2016)</p> <ul style="list-style-type: none">✓ All XML Elements must have a closing Tag and XML Tags are Case Sensitive.✓ XML Elements must be Properly Nested.✓ XML documents have a Root Element and XML Attribute Values are quoted. 5 pre-defined entity references in XML✓ White-space is preserved in XML and XML Stores New Line as LF.
9.	<p>Define XML attributes.</p> <p>XML elements can have attributes in the start tag, just like HTML. Attributes are used to provide additional information about elements.</p> <pre> </pre> <p>In the example below, the file type is irrelevant to the data, but can be important to the software that wants to manipulate the element.</p> <pre><file type="gif">computer.gif</file></pre>
10.	<p>List out the characteristics of XML attributes.</p> <ul style="list-style-type: none">✓ Attributes cannot contain multiple values (child elements can)✓ Attributes are not easily expandable (for future changes)✓ Attributes cannot describe structures (child elements can)✓ Attributes are more difficult to manipulate by program code✓ Attribute values are not easy to test against a Document Type Definition (DTD) - which is used to define the legal elements of an XML document.✓ Attributes are used to store metadata but sub-elements are used to store actual data.
11.	<p>Write an example for XML syntax.</p> <p>XML documents use a self-describing and simple syntax.</p> <pre><?xml version="1.0" encoding="utf-8"?> <World> <Continent Name="Africa"> </Continent> <Continent Name="North America" /> </World></pre>
12.	<p>Define the term DTD.</p> <p>A Document Type Definition (DTD) defines the legal building blocks of an XML document. It defines the document structure with a list of legal elements and attributes. A DTD can be declared inside an XML document or in an external file.</p> <p>There are two ways associating a DTD with a XML document, they are</p> <ul style="list-style-type: none">✓ Internal DTD-DTD can be declared inline in your XML✓ External DTD-an XML document refers to external DTD.





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13.	What is the difference between document type declaration (DOCTYPE) and DTD? A document type declaration and a DTD serve very different, although related purpose. The DOCTYPE is used to identify and name the XML content whereas the DTD is used to validate the metadata contained within.									
14.	Why do you use a DTD? <ul style="list-style-type: none"> ✓ With a DTD, independent groups of people can agree on a standard DTD for interchanging data. ✓ Your application can use a standard DTD to verify that data that you receive from the outside world is valid. You can use a DTD to verify your own data. 									
15.	How to declare DTD attributes? <code><!ATTLIST element-name attribute-name attribute-type default-value></code> DTD example: <code><!ATTLIST payment type CDATA "cheque"></code> XML example: <code><payment type="cheque" /></code>									
16.	Define Well-formed documents. Valid XML Documents A "Valid" XML document is a "Well Formed" XML document, which conforms to the rules of a DTD: <pre> <?xml version="1.0" encoding="UTF=8"?> <!DOCTYPE note SYSTEM "Note.dtd"> <note> <to>Tove</to> <from>Jani</from> <heading>Remainder</heading> <body>Don't Forget me this weekend!</body> </note> </pre>									
17.	Compare XML and HTML. <table border="1" data-bbox="149 1361 1377 1581"> <thead> <tr> <th data-bbox="149 1361 739 1406">XML</th> <th data-bbox="739 1361 1377 1406">HTML</th> </tr> </thead> <tbody> <tr> <td data-bbox="149 1406 739 1496">XML was designed to describe data, with focus on what data is.</td> <td data-bbox="739 1406 1377 1496">HTML was designed to display data, with focus on how data looks.</td> </tr> <tr> <td data-bbox="149 1496 739 1541">XML is about carrying information.</td> <td data-bbox="739 1496 1377 1541">HTML is about displaying information.</td> </tr> <tr> <td data-bbox="149 1541 739 1581">User defined tags</td> <td data-bbox="739 1541 1377 1581">Pre-defined tags.</td> </tr> </tbody> </table>		XML	HTML	XML was designed to describe data, with focus on what data is.	HTML was designed to display data, with focus on how data looks.	XML is about carrying information.	HTML is about displaying information.	User defined tags	Pre-defined tags.
XML	HTML									
XML was designed to describe data, with focus on what data is.	HTML was designed to display data, with focus on how data looks.									
XML is about carrying information.	HTML is about displaying information.									
User defined tags	Pre-defined tags.									
18.	Define XML schema? An XML schema provides more detail about the kind of data that can appear as part of an XML document. XML Schema documents are used to define and validate the content and structure of XML data. An XML Schema describes the structure of an XML document, just like a DTD. An XML document validated against an XML Schema is both "Well Formed" and "Valid". The purpose of an XML Schema is to define the legal building blocks of an XML document, just like a DTD.									
19.	Write an example of an XML schema. <pre> <bookstore xmlns:xsp="http://www.w3.org/2001/XMLSchema-instance" xsp:schemaLocation="http://www.book.org book.xsd"> </pre>									





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20. **What is meant by a XML namespace? (Nov 2016)**
XML namespaces are used for providing uniquely named elements and attributes in an XML document. They are defined in a W3C recommendation. An XML instance may contain element or attribute names from more than one XML vocabulary.

21. **Why do we need XML namespace?**
There are two fundamental needs for namespace
 ✓ To disambiguate between two elements that happen to share same name
 ✓ To group elements relating to a common idea together.

22. **Distinguish between expanded namespace and qualified namespace.**

Expanded Namespace	Qualified namespace
An expanded name is a pair consisting of a namespace name and a local name.	A qualified name is a name subject to namespace interpretation.
For a name <i>N</i> in a namespace identified by a URI <i>I</i> , the namespace name is <i>I</i> . For a name <i>N</i> that is not in a namespace, the namespace name has no value.	Documents conforming to this specification, element and attribute names appear as qualified names. Syntactically, they are either prefixed names or unprefixed names.

23. **List some examples of XML editors**
XML notepad, XML cooktop, XML pro, XML spy and Liquid XML studio.

24. **What is the difference between HTML link and Xlink?**

HTML link	XML link
HTML link involves only two resources. (source and destination) The resource which is initiating the link. The resource to which the link it pointing to.	XML link provides functionality for defining links which involves multiple resources.
HTML hyperlinks are always one way.	XML link are multi-directional
HTML links are embedded in HTML document.	Xlinks are embedded in XML document.
In HTML only few restricted element can be linking elements. For e.g.: <A>-anchor tag (or) <map> with and <area> elements	Any XML element can be a linking element.

25. **Define xFiles.**
xFiles is a collection of classes for hand-coders. It was built to provide a simple, yet exceptionally high-performance method to convert xml files or strings to Clarion data structures, and vice-versa. xFiles explains about XPath, XLink, and XPointer.

26. **List the industries where XML are used.**
For exchanging data between organization in internet there are thousand there are thousand of XML formats exist, for many different industries, to describe day-to-day data transactions. For e.g., Stock and shares, Financial transactions, medical data, mathematical data, scientific measurements, news information and weather services.





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27.	<p>What is XPATH?</p> <p>XPath is used to navigate through elements and attributes in XML documents. eXensible Style sheet Language Transformations (XSLT) uses XPath to find information in an XML document.</p>
28.	<p>What are the benefits of an XML editor than text editor?</p> <p>An XML editor will help to prevent you from making error, while typing XML file XML editor are similar to HTML editors in that they provide syntax highlighting which helps with readability when you're coding. They'll automatically insert a closing tag once you're added a opening tag A good XML editor should also provide validation-a way for you to validate that the documents you create are well formed.</p>
29.	<p>What do you mean by XLink?</p> <p>In HTML, that the element defines a hyperlink. This is not how it works with XML. In XML documents, you can use whatever element names want - it is impossible for browsers to predict what hyperlink elements will be called in XML documents. The solution for creating links in XML documents was to put a marker on elements that should act as hyperlinks.</p>





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UNIT II

BUILDING XML- BASED APPLICATIONS: Parsing XML – using DOM, SAX – XML Transformation and XSL – XSL Formatting – Modeling Databases in XML.

UNIT-II / PART-A

1.	<p>Write down the parts of XSL. eXensible Stylesheet Language (XSL) consists of three parts:</p> <ul style="list-style-type: none"> ✓ XSLT - a language for transforming XML documents ✓ XPath - a language for navigating in XML documents ✓ XSL-FO - a language for formatting XML documents. 									
2.	<p>Write a simple stylesheet using XSL. (Nov 2016) <pre><?XML version= "1.0"?> <xsl:stylesheet XMLns:xsl= "URI" version= "1.0"> <!--XSL-T CONVERSION RULES--> </xsl:stylesheet></pre> <p>The <xsl:stylesheet> element defines how the XSLT processor should process the current XSL document. The XMLns attribute is the namespace definition.</p> </p>									
3.	<p>What are the XML transformation technologies? An XML transformation language is a programming language designed to transform an input XML document into an output document which satisfies some specific goal. There are two cases of transformation: XML to XML: the output document is an XML document and XML to Data: the output document is a byte stream.</p>									
4.	<p>Define XQuery. XQuery is the language for querying XML data. XQuery for XML is like SQL for databases. It is built on XPath expressions. It is supported by all the major database engines (IBM, Oracle, Microsoft, etc.) and is a W3C Recommendation.</p>									
5.	<p>List some of transformation technologies. XML is supported by several technologies that allow XML to be manipulated and modified in various ways. Transformation technology is used to transform the XML document in one form to another form. Transformation technologies: i) XSLT ii) XLINK iii) XPATH iv) XQUERY.</p>									
6.	<p>What is XSLT?</p> <ul style="list-style-type: none"> ✓ XSL Transformations is the most important part of XSL ✓ XSLT transforms an XML document into another XML document or another format like HTML, PDF and Wireless Markup Language (WML). ✓ XSLT uses XPath to navigate in XML documents. ✓ XSLT is a W3C Recommendation. 									
7.	<p>Compare CSS and XSL.</p> <table border="1" style="width: 100%;"> <thead> <tr> <th>Cascading Style Sheet</th> <th>XML Style sheet Language</th> </tr> </thead> <tbody> <tr> <td>CSS can be used in HTML to design web sites.</td> <td>XSL cannot be used in HTML.</td> </tr> <tr> <td>CSS is not a transformation language</td> <td>CSS is a transformation language</td> </tr> <tr> <td>XSL is having the formatting object tree setup differently from the source tree.</td> <td>XSL is having the formatting object tree setup differently from the source tree</td> </tr> </tbody> </table>		Cascading Style Sheet	XML Style sheet Language	CSS can be used in HTML to design web sites.	XSL cannot be used in HTML.	CSS is not a transformation language	CSS is a transformation language	XSL is having the formatting object tree setup differently from the source tree.	XSL is having the formatting object tree setup differently from the source tree
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	CSS provides the inheritance of the formatting object that is related to the source tree	XSL can't provide the inheritance of the source tree using the formatting properties
8.	<p>List some browsers that support XML and XSL. Mozilla Firefox As of version 1.0.2, Firefox has support for XML and XSLT (and CSS). Mozilla: Mozilla includes Expat for XML parsing and has support to display XML + CSS. Mozilla also has some support for Namespaces. Mozilla is available with an XSLT implementation.</p> <p>Netscape: As of version 8, Netscape uses the Mozilla engine, and therefore it has the same XML / XSLT support as Mozilla. Opera: As of version 9, Opera has support for XML and XSLT (and CSS). Version 8 supports only XML + CSS. Internet Explorer: As of version 6, Internet Explorer supports XML, Namespaces, CSS, XSLT, and XPath. Version 5 is NOT compatible with the official W3C XSL Recommendation.</p>	
9.	<p>What is meant by XSL formatting? (May 2017)</p> <ul style="list-style-type: none"> ✓ The XSL technology is composed of XSL Formatting Objects (XSL-FO). ✓ XSL-FO was designed to assist with the printing and displaying of XML data. ✓ The main emphasis is on the document layout and structure. ✓ XSL-FO is a sophisticated version of Cascading Style Sheets (CSS). ✓ XSL-FO documents are well-formed XML documents. ✓ An XSL-FO formatting engine processes XSL-FO documents. 	
10.	<p>What is DOM? List the DOM interfaces. (Nov 2017) Document Object Model (DOM) is W3c supported standard Application Programming Interface (API) that provides a platform and language- neutral interface to allow developers to programmatically access and modify the content and structure documents. DOM is a cross-platform and language-independent interface for representing and interacting with objects in HTML, XHTML and XML documents. The nodes of every document are organized in a tree structure, called the DOM tree. DOM interfaces are Attr, Document, DocumentType, Node, Text.</p>	
11.	<p>Mention the levels of DOM. DOM provides a platform and language- neutral interface to allow developers to programmatically access and modify the content and structure documents. It has Level 0, Level 1, Level 2 and Level 3.</p>	
12.	<p>What are the advantages of DOM parsers?</p> <ul style="list-style-type: none"> ✓ It load XML file into main memory, and construct tree structure. ✓ It allows insertion and modification of XML document through programming. ✓ It is best suited for XML document with small size. 	
13.	<p>List some of the DOM parsers. A number of DOM parser is available in Java. The most popular are</p> <ul style="list-style-type: none"> ✓ JDOM ✓ Xerces developed as a part of apache XML project ✓ Java APIs for XML Processing (JAXP) - developed by Sun Microsystems. 	





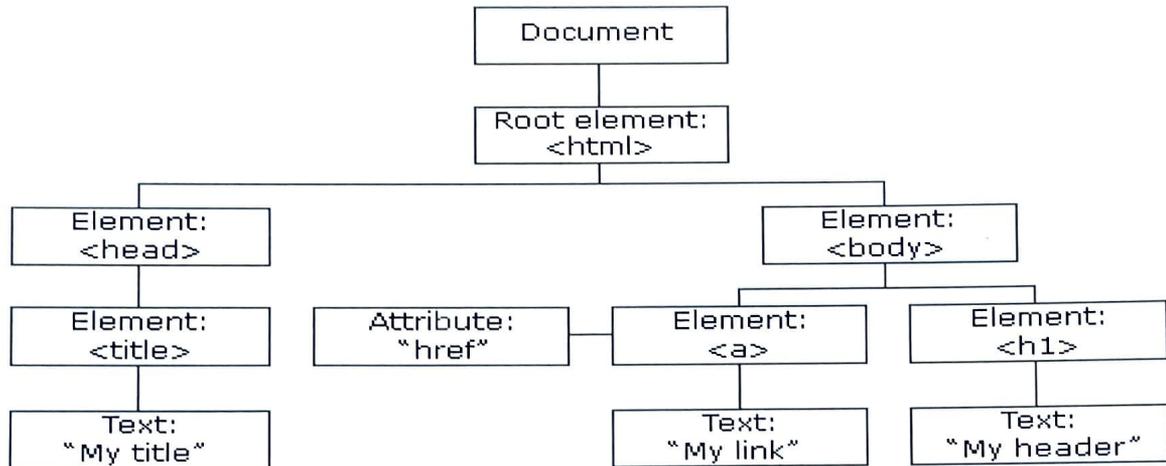
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14. Draw the structure of DOM.



15. Mention the drawbacks of DOM Parser.

- ✓ One of the big issues is that DOM can be memory intensive. When an XML document is loaded, the entire document is read in at once. A large document will require a large amount of memory to represent it.
- ✓ DOM is not practical for small devices such as PDAs and cellular phones.

16. List out the features of SAX.

- ✓ SAX is simple and event-driven
- ✓ SAX supports processing pipeline
- ✓ SAX requires programmers to maintain state.

17. What do you mean by SAX?

Simple API for XML (SAX) is an Application Programming Interface (API) that allows a programmer to interpret a Web file that uses XML - that is, a Web file that describes a collection of data. SAX is an alternative to using the DOM to interpret the XML file. As its name suggests, it's a simpler interface than DOM and is appropriate where many or very large files are to be processed, but it contains fewer capabilities for manipulating the data content.

18. Define Document model.

Document model defines set of element names and attributes that can appear in XML document. It is also called as Data model; it describes the logical structure of set of data. It specifies which information data set contains in terms of fields, which data each fields can contain, and the relationship between fields and other sets of data.

19. List the technologies of Data Models. List out some SAX parser.

The technologies of Data Models: DTD, XDR Schema and XML schema. The SAX parser is XERCES from apache XML project and JAXP from Sun Microsystems.

20. What is XDR schema?

XML Data Reduced (XDR) is to describe the schema of an XML document. It describes the schema in terms of both document content and types of content are contained in the document elements.





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21. **Why do I need SAX parser?**

SAX is completely free, so it can be embedded in a larger application without fees or even copyright notices. SAX is an event-based API.

Some SAX parser can validate a document against a DTD; validating parser can also tell you where validation has failed.

22. **Write the difference between DOM and SAX.**

Document Object Model (DOM)	Simple API for XML (SAX)
DOM parser is a tree-based API.	SAX parser is an event-based API.
A tree-based API is centered on a tree structure and therefore provides interfaces on components of a tree.	SAX parser does not create any internal structure.
Parses entire document	Parses until you tell it to stop
Represents result as a tree	Fires event handlers for each: Start tag, Tag body and End tag
Lets you search and modify tree	Low level APIs
Good for reading data/configuration files	Good for very large documents, especially if you only care about very small portions of the document.

23. **Mention the advantages of SAX parser.**

SAX is an event-based API. It provides a framework for defining event listener or handler. SAX is best suitable for very large XML documents, because instead of loading an entire document into memory all at once, SAX reads the document and notifies the client program when elements, text, comments are found.

24. **What are the drawbacks of SAX parser? (Nov 2017)**

- ✓ SAX parser is single pass, so you can't backup to earlier part of the document anymore than you can backup from a serial data stream.
- ✓ SAX is read-only parser. They do not provide the ability to manipulate a document or its structure.
- ✓ There is no formal specification for SAX and no random access.

25. **Differentiate JDOM and DOM interfaces.**

Document Object Model (DOM)	Java Document Object Model (JDOM)
DOM is an interface-based API.	JDOM is a class-based API.
No classes are available in DOM specification, only interfaces are given.	There are classes that encapsulate documents, elements, attributes, text and so on. This simplifies usage by minimizing downcasts.
DOM is a strict hierarchy based on a node, which leads to lots of downcasts. Downcasts add complexity to source code and reduce performance.	No downcast involved. This leads to improved performance.
DOM parses XML by itself.	JDOM does not parse XML by itself; rather, it can build JDOM objects from a DOM tree or a SAX parser.





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26.	Define a XML parser. (Nov 2016) <ul style="list-style-type: none">✓ It is a software library (or a package) that provides methods (or interfaces) for client applications to work with XML documents✓ It checks the well-formattedness and may validate the documents.✓ It does a lot of other detailed things so that a client is shielded from those complexities.						
27.	List out the properties of a Node object. <p>The properties of a Node object are nodeType, nodeName, parentNode, childNodes, previousSibling , nextSibling and attributes.</p>						
28.	What is the difference between TreeWalker and NodeIterator interfaces? <p>The TreeWalker interface provides many of the same benefits as NodeIterator.</p> <table border="1"><thead><tr><th>NodeIterator</th><th>TreeWalker</th></tr></thead><tbody><tr><td>NodeIterator presents a list-oriented view.</td><td>TreeWalker presents a tree-oriented view.</td></tr><tr><td>It allows you to move forward and backward.</td><td>It allows you to move to the parent of a node, move to one of its children and move to a sibling and also forward and backward movements.</td></tr></tbody></table>	NodeIterator	TreeWalker	NodeIterator presents a list-oriented view.	TreeWalker presents a tree-oriented view.	It allows you to move forward and backward.	It allows you to move to the parent of a node, move to one of its children and move to a sibling and also forward and backward movements.
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UNIT-III/ PART-A

1.	Define Service Oriented Architecture. (May 2018) Service Oriented Architecture is an architectural style that supports service-orientation. SOA is a style of design that guides all aspects of creating and using business services throughout their life cycle. It allows different applications to exchange data and participate in business processes.
2.	Define application architecture. <ul style="list-style-type: none">✓ Application architecture is to an application development team what a blueprint is to a team of construction workers.✓ Application architecture includes high-level abstract, physical and logical representation of the technical blueprint or common data models, communication flow diagrams, application-wide security requirements and aspects of infrastructure.
3.	List out the characteristics of contemporary SOA. (Nov 2016 & Nov 2017) <ul style="list-style-type: none">✓ Contemporary SOA increases quality of service.✓ Contemporary SOA is fundamentally autonomous.✓ Contemporary SOA is based on open standards.✓ Contemporary SOA supports vendor diversity.✓ Contemporary SOA promotes discovery.
4.	Mention the concrete characteristics of SOA. (May 2017) <ul style="list-style-type: none">✓ It is based on open standards.✓ It is architecturally composable.✓ It is capable of improving QoS.
5.	List out some common principles of service orientation. <ul style="list-style-type: none">✓ Services are reusable.✓ Services share a formal contract.✓ Services are loosely coupled.✓ Services abstract underlying logic.✓ Services are composable.✓ Services are autonomous✓ Services are stateless.✓ Services are discoverable.
6.	Define Service Proxy. The service provider supplies a service proxy to the service consumer. The service consumer executes the request by calling an API function on the proxy. It then formats the request message and executes the request on behalf of the consumer. The service proxy is a convenience entity for the service consumer. It is not required; the service consumer developer could write the necessary software for accessing the service directly.
7.	Define service. How do services communicate? A service represents a logically grouped set of operations capable of performing the related units of work. Services communicate via SOAP messages.





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8. **Define enterprise architecture.**

- ✓ Enterprise architecture specification to an organization like an urban plan to a city.
- ✓ A master specification is to be created, providing high-level overview of all forms of heterogeneity that exist within an enterprise.
- ✓ Enterprise architectures contain a long-term vision of how the organization plans to evolve its technology and environments.

9. **What do you meant by coarse grained services?**

A service-based system controls the network access to the objects within the service through a set of coarse-grained interfaces. A service implemented as objects has one or more coarse-grained objects that act as distributed façades. These objects are accessible over the network and provide access to the internal object state from external consumers of the service.

10. **How does SOA address the issues that arise in client-server architecture?**

- ✓ Service oriented solutions eliminate dependencies on user environment by delegating all processing to the server side.
- ✓ SOA establishes an adaptable and extensible architecture mode that allows solutions to be enhanced with minimal impact. Services can encapsulate existing legacy logic providing a standardized API that can plug into larger integrated solution.

11. **How is SOA different from distributed internet architecture?**

SOA introduces processing and security requirements that differ from distributed internet architecture and SOA administration is typically more complex due to its reliance on message-based communication.

12. **Write the differences between service orientation and object orientation.**

Service Orientation	Object Orientation
Emphasizes loose coupling between units of processing logic (services).	Emphasizes tightly bound units of processing logic (objects).
Encourages coarse-grained interfaces so that units of communication contain as much information as possible for completion of a given task.	Supports fine-grained interfaces so that units of communication perform various sized tasks.

13. **What do you mean by the term “separation of concerns”?**

This theory is based on the notion that it is beneficial to break down a large problem into a series of individual concerns. This allows logic required to solve the problem to be decomposed into a collection of smaller related pieces. Each piece of logic addresses a specific concern.





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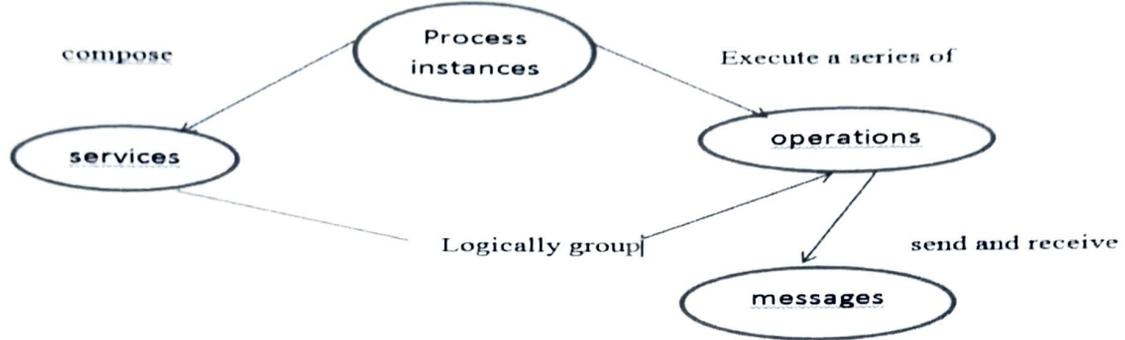
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14. How do components in an SOA inter-relate?



15. List out the components SOA.

- ✓ SOAP messages- contains data for operation
- ✓ Web service operations-holds the logic required to process messages
- ✓ Web services- processing logic, logically grouped set of operations
- ✓ Processes / Activities - automation logic, large units of work that requires the completion of smaller units of work.

16. How loose coupling concept achieved in SOA? (Nov 2016)

It is a condition wherein a service acquires knowledge of another service while still remaining independent of that service. It is achieved through the use of service contracts that allow services.

17. What are the two types of autonomy?

i. **Service level autonomy:** Service boundaries are distinct from each other but the service may share underlying resources. For e.g., a wrapper service that encapsulates a legacy environment that is used independently from the service has service-level autonomy. It governs the legacy system but shares resources with other legacy clients.

ii. **Pure autonomy:** The underlying logic is under complete control and ownership of the service. This is the case when the underlying logic is built from the ground up in support of the service.

18. Define a process.

A process contains the business rules that determine which service operations are used to complete a unit of automation. It represents a large piece of work that requires the completion of smaller units of work.

19. What is a service contract?

Service contract provides a formal definition of

- ✓ Service endpoint
- ✓ Each service operation.
- ✓ Every input and output message supported by each service operation.
- ✓ Rules and characteristics of the service and its operations.





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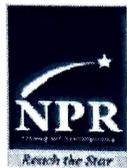
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20.	What does contemporary SOA represent? An open, extensible, federated, composable architecture that promotes service-orientation and is composed of autonomous, QoS-capable, vendor diverse, interoperable, discoverable and potentially reusable services implemented as web services.
21.	What are the characteristics of contemporary SOA that are not directly supported? 1. enterprise-wide loose coupling 2. support for service-oriented business modeling 3. organizational agility 4. layers of abstraction
22.	Suggest steps for composing a preliminary SOA. Step 1: Choose service layers Step 2: Position core standards Step 3: Choose SOA extensions
23.	List out the principles that support others in SOA. Principles, such as service reusability and service composability, benefit from the support of other implemented principles. Principles, such as service loose coupling, service contract, and service autonomy, provide significant support for the realization of other principles.
24.	What are the characteristics of Web services that are in full alignment with the corresponding principles of service-orientation? Service abstraction, composability, loose coupling, and the need for service contracts are native characteristics of Web services that are in full alignment with the corresponding principles of service-orientation.
25.	What are the benefits of SOA? (May 2017) <ul style="list-style-type: none">✓ Improved integration (and intrinsic interoperability)✓ Inherent reuse✓ Streamlined architectures and solutions✓ Leveraging the legacy investment✓ Establishing standardized XML data representation✓ Focused investment on communications infrastructure✓ "Best-of-breed" alternatives✓ Organizational agility.
26.	What does architecture refer to? Mention its types. Architecture refers to systematic arrangement of computerized automation solutions which is standardized definition of a baseline application that could act as a template for all others. Types: Application architecture, Enterprise architecture and Service-oriented architecture.
27.	Give examples of component based technologies. Enterprise java beans(EJB), COM+ (or) DCOM, CORBA and JAVA RMI.





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28. **What is the role of proxy service and application integration service?**

Proxy service simply provides auto generated WSDL definition that reflects web service interface. Application integration service is implemented as controller of other application services to coordinate with each other.

29. **What is distributed architecture?**

Distributed architecture is built upon component technology. It replaces client and server software's are replaced with remote components. Communication between components is done by RPC protocol

EG: CORBA, DCOM, EJB .etc

30. **What is the difference between service activity and process?**

Service activity	Process
Service activity is used to represent the temporary interaction of a group of web services.	Process is a static definition of interaction logic.
An activity is best compared to an instance of a process.	A group of services follow a particular path through the process logic to complete a task.

31. **Differentiate stateless and stateful service.**

Stateful: A service is said to be stateful if it retains information between function calls. It has instance variables. E.g.: EJB stateful session bean and entity bean.

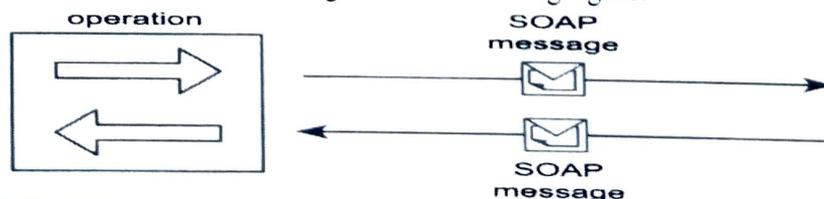
Stateless: A service is said to be stateless if it does not retain information between function calls. It has no instance variables. E.g.: EJB stateless session beans.

32. **List any four pitfalls of SOA. (Nov 2017)**

- ✓ Building service-oriented architectures like traditional distributed architectures
- ✓ Not standardizing SOA
- ✓ Not creating a transition plan
- ✓ Not starting with an XML foundation architecture
- ✓ Not keeping in touch with product platforms and standards development
- ✓ Not understanding Web services security

33. **Define SOAP message. (May 2018)**

Services communicate via SOAP messages. SOAP messages contain data for operation. An operation sends and receives SOAP messages in the following figure.





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34. **Write the IT centric entry points. (May 2018)**

IT centric entry points to help the enterprise integrate the business-centric SOA entry points are as follows:

Connectivity – underlying connectivity to enable business-centric SOA.

Reuse – create flexible service based business applications.

35. **What is the responsibility of the service? (May 2018)**

Service performs the user's tasks according to "principles of efficiency, justice, fairness and respect of current social and cultural values". Online service providers such as Facebook, Google, Microsoft and Twitter are expected to act as good citizens, by aligning their goals with the needs of societies, supporting the rights of their users.





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UNIT-IV / PART-A

1.	<p>What is meant by web service?</p> <p>A software component stored on one computer that can be accessed via method calls by an application on another computer over a network. Web services communicate using technologies such as SML and HTTP.</p>
2.	<p>Define SOAP.</p> <p>Simple Object Access Protocol (SOAP) An XML-based protocol that allows web services and clients to communicate in a platform-independent manner.</p> <p>It gives set of rules for moving data directly to the recipient or through and intermediate message queue. SOAP uses common web protocols like HTTP, FTP and SMTP to enable communication across the web.</p>
3.	<p>Sketch the anatomy of a SOAP message. (Nov 2016)</p> <pre><?xml version="1.0"?> <SOAP:Envelope xmlns:SOAP="http://www.w3.org/2001/12/SOAP-envelope" SOAP:encodingStyle="http://www.w3.org/2001/12/SOAP-encoding"> <SOAP:Header> ... </SOAP:Header> <SOAP:Body> ... <SOAP:Fault> ... </SOAP:Fault> </SOAP:Body> </SOAP:Envelope></pre>
4.	<p>Mention the two SOAP message style.</p> <p>RPC style message</p> <ul style="list-style-type: none">✓ It was designed to replace proprietary RPC protocols.✓ It maps root element of SOAP message with name of the function call. <p>Document style message</p> <ul style="list-style-type: none">✓ SOA relies on this message to enable larger payloads and reduced message transmission volumes between services.✓ It maps root element of SOAP message with name of the class or interface.
5.	<p>Define WSDL.</p> <p>Web Services Definition Language (WSDL) is the focal point of service design as it is used to design the abstract and concrete definition of service interfaces. WSDL definition hosts multiple child constructs associated with abstract and concrete parts of the service description.</p>





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6.	<p>What are the two types of WSDL elements? (MAY 2017)</p> <p>The two types of WSDL elements are abstract description and concrete description. An <i>abstract description</i> establishes the interface characteristics of the Web service without any reference to the technology used to host or enable a Web service to transmit messages. Because the execution of service application logic involves communication, the abstract Web service interface needs to be connected to a physical transport protocol. This connection is defined in the <i>concrete description</i> portion of the WSDL file, which consists of three parts: binding, port, and service.</p>
7.	<p>What is the usage of envelope element in SOAP message structure?</p> <p>Every SOAP message is packaged in to a container called Envelope. The envelope is responsible for housing all parts of the message.</p>
8.	<p>Define JAX-WS. (MAY 2017)</p> <p>Java API for XML Web Services (JAX-WS) is a technology for building web services and clients that communicate using XML. JAX-WS allows developers to write message-oriented as well as RPC-oriented web services.</p>
9.	<p>List out the building blocks of SOAP.</p> <p>A SOAP message is an ordinary XML document containing the following elements:</p> <ul style="list-style-type: none">✓ A required Envelope element that identifies the XML document as a SOAP message✓ An optional Header element that contains header information✓ A required Body element that contains call and response information✓ An optional Fault element that provides information about errors that occurred while processing the message.
10.	<p>What are the features of SOAP?</p> <ul style="list-style-type: none">✓ SOAP is a communication protocol and does communication between applications✓ SOAP is a format for sending messages✓ SOAP is designed to communicate via Internet✓ SOAP is platform and language independent✓ SOAP is based on XML, simple and extensible✓ SOAP allows you to get around firewalls✓ SOAP will be developed as a W3C standard.
11.	<p>What is SOAP actor attributes?</p> <p>A SOAP message may travel from a sender to a receiver by passing different endpoints along the message path. Not all parts of the SOAP message may be intended for the ultimate endpoint of the SOAP message but, instead, may be intended for one or more of the endpoints on the message path. The SOAP actor attribute may be used to address the Header element to a particular endpoint.</p>
12.	<p>List some other transport protocol like SOAP.</p> <p>Transport protocol like SOAP is Internet Inter-ORB Protocol (IIOP) for Common Object Request Broker Architecture (CORBA), Object Remote Procedure Call (OPRC) for Distributed Component Object Model (DCOM) or RPM for RMI.</p>





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13.	<p>What do you mean by UDDI? (May 2017 & Nov 2017) Universal Description, Discovery and Integration (UDDI) is a platform-independent framework for describing services, discovering businesses, and integrating business services by using Internet.</p> <ul style="list-style-type: none">✓ UDDI is a directory service where businesses can register and search for Web services.✓ UDDI is a directory for storing information about web services✓ UDDI is a directory of web service interfaces described by WSDL✓ UDDI communicates via SOAP.✓ UDDI is built into the Microsoft .NET platform.
14.	<p>What are all the two SOAP design Patterns?</p> <ul style="list-style-type: none">✓ Layers Pattern: the basis for the design of telecommunication infrastructures such as TCP/IP.✓ Pipe and Filter Pattern: a stream of data moving through a series of pipes and filters and being transformed from origin to destination.
15.	<p>Write syntax rules of SOAP.</p> <ul style="list-style-type: none">✓ A SOAP message MUST be encoded using XML✓ A SOAP message MUST use the SOAP Envelope namespace✓ A SOAP message MUST use the SOAP Encoding namespace✓ A SOAP message must NOT contain a DTD reference✓ A SOAP message must NOT contain XML Processing Instructions.
16.	<p>What is SOAP – HTTP binding? A SOAP method is an HTTP request/response that complies with the SOAP encoding rules. HTTP + XML = SOAP A SOAP request could be an HTTP POST or an HTTP GET request. The HTTP POST request specifies at least two HTTP headers: Content-Type and Content-Length.</p>
17.	<p>Mention the parts of SOAP faults. If a Fault element is present, it must appear as a child element of the Body element. A Fault element can appear once in a SOAP message. The parts of SOAP faults are i) Faultcode ii) faultstring iii) detail.</p>
18.	<p>What is WS-Transaction specification? The WS-Transaction specification is an activity of the Web Service Interoperability Organization (WS-I Organization) which is an industry-wide effort at standardizing how Web services are requested and delivered.</p>
19.	<p>Mention the parts of SOAP faults. If a Fault element is present, it must appear as a child element of the Body element. A Fault element can appear once in a SOAP message. The parts of SOAP faults are i) Faultcode ii) faultstring iii) detail.</p>





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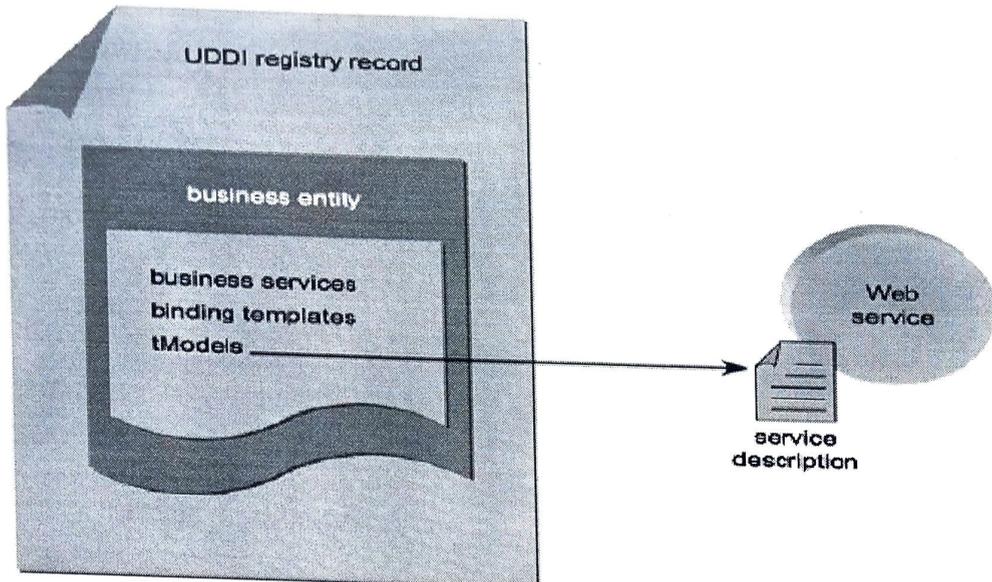
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20. Draw basic structure of UDDI with its elements.



21. What is WS-Transaction specification?

The WS-Transaction specification is an activity of the Web Service Interoperability Organization (WS-I Organization) which is an industry-wide effort at standardizing how Web services are requested and delivered.

22. Define orchestration.

Web service orchestration is the direction of specific web service business processes by a central controller.

The controller coordinates asynchronous interactions, flow control, business transaction management and business process monitoring.

Business Process Modeling Notation (BPMN) is used to define a visual representation of the flow and Business Process Execution Language (BPEL) is used to write the code that executes the services.

23. What are RPC and DCOM?

Remote Procedure Call (RPC) is C based and it has structured programming semantics and RMI is a Java based technology and it's object oriented.

With RPC you can just call remote functions exported into a server, in RMI you can have references to remote objects and invoke their methods.

It passes and return more remote object references that can be distributed among many JVM instances

Distributed Component Object Model (DCOM) is based on the COM, which provides a set of interfaces allowing clients and servers to communicate within the same computer.





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24.	<p>Write the examples of the design standards provided by WS-I Basic Profile.</p> <ul style="list-style-type: none">✓ SOAP envelopes cannot contain Document Type Declarations or processing instructions.✓ The use of the SOAP encoding Style attribute within SOAP envelopes is highly discouraged.✓ Required SOAP header blocks must be checked prior to proceeding with the processing of other header blocks and the message contents.✓ When a WSDL part construct (within the message construct) uses the element attribute, it must reference a global element declaration.✓ The sequence of elements within the SOAP Body construct must be identical to the sequence established in the corresponding WSDL parts construct.✓ The WSDL binding element can only use the WSDL SOAP binding.
25.	<p>List the layers of abstraction identified for SOA.</p> <ul style="list-style-type: none">✓ The application service layer✓ The business service layer✓ The orchestration service layer.
26.	<p>What is RMI?</p> <p>The Remote Method Invocation (RMI) is a <u>Java API</u> that performs <u>remote method invocation</u>, the object-oriented equivalent of <u>remote procedure calls (RPC)</u>, with support for direct transfer of <u>serializedJava</u> classes and <u>distributed garbage collection</u>.</p>
27.	<p>What are IIOP and CORBA?</p> <p>Internet Inter-ORB Protocol (IIOP) is a protocol that makes it possible for distributed programs written in different programming languages to communicate over the Internet. IIOP is a critical part of a strategic industry standard, the CORBA.</p> <p>Common Object Request Broker Architecture (CORBA) is an architecture and specification for creating, distributing, and managing <u>distributed program objects</u> in a network. It allows programs at different locations and developed by different vendors to communicate in a network through an "interface broker."</p> <p>CORBA was developed by a consortium of vendors through the Object Management Group (OMG), which currently includes over 500 member companies.</p>
28.	<p>List out some primitive MEPs. (Nov 2016)</p> <p><i>a. Request-response Message Exchange Patterns (MEPs):</i></p> <ul style="list-style-type: none">✓ This is the most popular MEP in use among distributed application environments and the one pattern that defines synchronous communication.✓ It establishes a simple exchange in which a message is first transmitted from a source (service requestor) to a destination (service provider).✓ Upon receiving the message, the destination (service provider) then responds with a message back to the source (service requestor). <p><i>b. Fire-and-forget MEP:</i> This simple asynchronous pattern is based on the unidirectional transmission of messages from a source to one or more destinations.</p>





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29.	<p>What are the standards that web service depends on? (May 2017) When the initial set of Web services standards emerged, locating the latest versions of known service descriptions and discovering new Web services that meet certain criteria was taken into account. So UDDI is formed as part of the first generation of Web services standards.</p>							
30.	<p>When to use business activities and when to use atomic transactions? If transaction time for your WS coordination is about few seconds to few minutes use atomic transaction. If transaction to WS coordination is about an hour, days and weeks to complete a task use business transactions.</p>							
31.	<p>Mention the companies and software makes use of web services. Amazon, Google, eBay, PayPal and many others make their server-side applications available to partners via web services. By using web services, companies can spend less time developing new applications and can create innovative new applications. Net beans 5.5.1 enables programmers to “publish” and/or “consume” web services.</p>							
32.	<p>List the protocols supported by business activities.</p> <ul style="list-style-type: none"> ✓ The business agreement with participant completion protocol ✓ The business agreement with coordinator completion protocol 							
33.	<p>List all the fundamental services roles. SOAP Sender: ASOAP node that transmits a message. SOAP Receiver: A SOAP node that receives a message. SOAP Intermediary: SOAP that transmits and receives a message and optionally processes the message prior to transmission. Initial SOAP Sender: The first SOAP node that transmits a message. Ultimate SOAP Receiver: The last SOAP node that receives a message.</p>							
34.	<p>Compare Atomic transactions and business transactions.</p> <table border="1" data-bbox="128 1323 1370 1621"> <thead> <tr> <th data-bbox="128 1323 739 1361">Atomic transactions</th> <th data-bbox="739 1323 1370 1361">Business transactions</th> </tr> </thead> <tbody> <tr> <td data-bbox="128 1361 739 1496">It manages complex short running business activities, it transaction can take about few seconds to few minutes.</td> <td data-bbox="739 1361 1370 1496">It manages complex long-running service activities, which can take hours, days and even weeks to complete the task.</td> </tr> <tr> <td data-bbox="128 1496 739 1621">It offers rollback facilities for unsuccessful transactions.</td> <td data-bbox="739 1496 1370 1621">It does not offer rollback facilities for the unsuccessful transactions instead it offers an alternate compensation plan, incase of failure.</td> </tr> </tbody> </table>		Atomic transactions	Business transactions	It manages complex short running business activities, it transaction can take about few seconds to few minutes.	It manages complex long-running service activities, which can take hours, days and even weeks to complete the task.	It offers rollback facilities for unsuccessful transactions.	It does not offer rollback facilities for the unsuccessful transactions instead it offers an alternate compensation plan, incase of failure.
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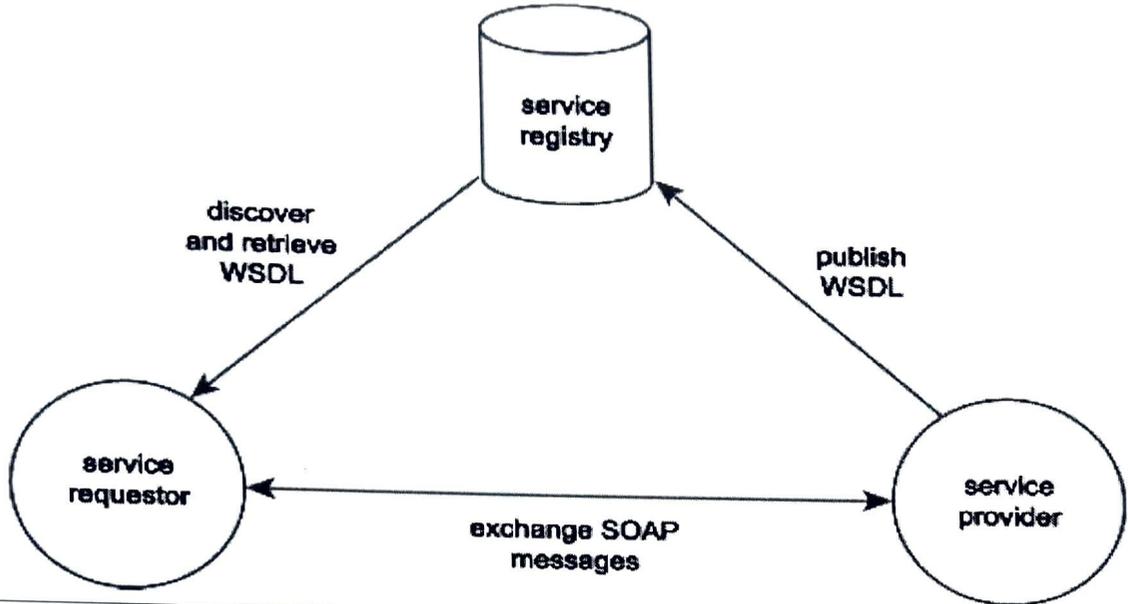
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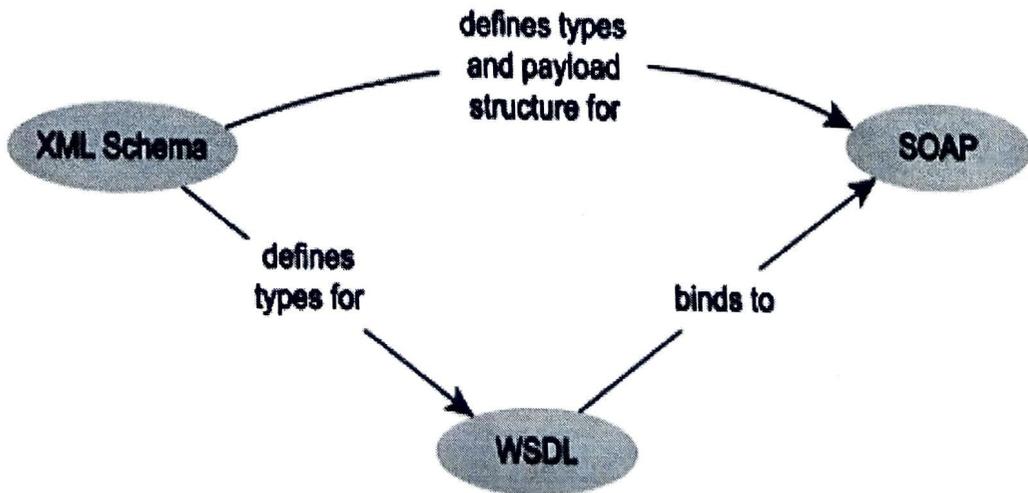
35. Draw the diagram of first generation web service architecture.



36. List the protocol supported by WS transactions?
A completion protocol: it is used to initiate the commit or abort states of the transaction
The durable 2PC protocol: only the services that representing permanent data repositories can register with this protocol.
The volatile 2PC protocol: only the services that deals with non- persistent data can register with this protocol.

37. What do you mean by WS-CDL?
Web Service-Choreography Description Language is one of the several specifications that attempts to organize information exchange between multiple orchestrations.
WS-CDL is a industry specification that standardizes choreography.

38. What is the core specifications associated with service design?





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39.	Write the difference between Orchestration and Choreography.	
	Orchestration	Choreography
	It helps to control business process flow of complex activities within the organization, but does not support collaboration between services running in different organization.	It allows collaboration and integration of multiple services from different organizations that need to work together to achieve a common goal.
	It expresses organization-specific business workflow.	It is not owned by a single organization.
	A single organization owns and controls the logic behind an orchestration.	No single organization owns or controls the logic behind choreography.
40.	Compare activity and Orchestration.	
	Activity	Orchestration
	It can be applied to any logical unit of work completed by a service-oriented solution.	The scope of a single orchestration can be classified as a complex and long-running activity.
41.	What are the two web service design classifications? Temporary classification: It relate to roles assumed by a service at runtime. Permanent classification: It is based on service model.	
42.	Differentiate document style SOAP messages and document centric XML documents. Document centric XML documents refer to published documents represented by XML whereas document style SOAP messages contain application data.	
43.	What is service activity? The interaction of a group of services working together to complete a task can be referred to as service activity.	
44.	List the types of intermediaries. Forwarding/ Passive intermediaries: It is responsible for relaying the contents of a message to a subsequent SOAP node, without modifying the content of SOAP message. Active intermediaries: The intermediary will process and alter header block information relating to the forwarding logic it is executing. It can alter existing header blocks, insert new ones and execute a variety of supporting actions. For e.g., it will remove a header block it has processed.	
45.	State the characteristics of orchestration service layer. (May 2018) The orchestration service layer introduces a parent level of abstraction that relieves the need for other services to manage interaction details required to ensure that service operations are executed in a specific sequence. The orchestration service layer consists of one or process services that compose business and application services according to business rules and business logic embedded within process definitions.	





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46. Mention the three types of choreography. (May 2018)

Choreography Type	Variable Type
<i>Abstract</i>	<p>In an Abstract Choreography, the Variable Type is described by:</p> <ul style="list-style-type: none">• A unique identifier, e.g. a URI, that identifies the variable type and• A semantic definition that explains the purpose of the variable type and outlines its content. <p>No detail is provided of the actual type, e.g. XSD definitions</p>
<i>Portable</i>	<p>In a Portable Choreography the Variable Type extends the Abstract Variable Type by defining its XML Schema Type. Note that this may be simple or complex depending on the need.</p>
<i>Concrete</i>	<p>In a Concrete Choreography, Variable Type is defined in the same way as for a Portable Choreography</p>





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UNIT V

BUILDING SOA-BASED APPLICATIONS

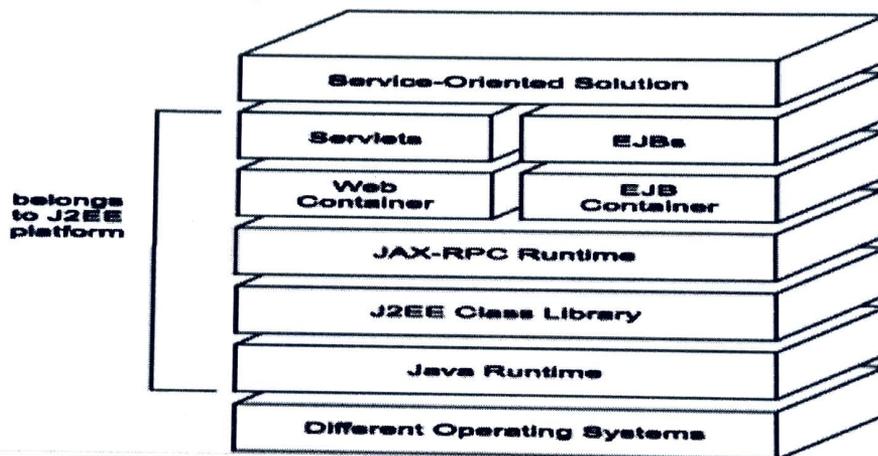
Service Oriented Analysis and Design – Service Modeling – Design standards and guidelines -- Composition – WS-BPEL – WS-Coordination – WS-Policy – WS-Security – SOA support in J2EE.

UNIT-V / PART-A

1. **Define WS-Coordination framework.**

The WS-Coordination framework exposes an Activation Service which supports the creation of coordinators for specific protocols and their associated contexts.

2. **Draw the J2EE platform as they relate to SOA.**



3. **What is the need of design standards?**

Design standards are critical to achieving a successful SOA. Because the design we are defining as part of this phase is concrete and permanent, every service produced needs to be as consistent as possible. The key SOA benefits, such as reusability, composability and agility, will be risk. It is assumed that prior to starting this phase, design standards are already in place.

4. **Relate logical components of automation logic to different sized units of logic.**

- ✓ Messages = units of communication
- ✓ Operations = units of work
- ✓ Services = units of processing logic (collections of units of work)
- ✓ Processes = units of automation logic (coordinated aggregation of units of work).

5. **List a series of benefits for incorporating service-orientation into the business process level.**

- ✓ Business services build agility into business models.
- ✓ Business services prepare a process for orchestration.
- ✓ Business services enable reuse and it can realize the service-oriented enterprise.

6. **List out the elements of WS-Policy framework.**

- ✓ Policy element
- ✓ TextEncoding, Language, SpecVersion, and MessagePredicate assertions
- ✓ ExactlyOne element, All element
- ✓ Usage and Preference attributes, PolicyURIs attribute
- ✓ PolicyReference element, PolicyAttachment element





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7.	<p>What do you mean by WS-Security? (May 2017) WS-Security framework provides extensions that can be used to implement message-level security measures. These protect message contents during transport and during processing by service intermediaries. WS-Security is designed to work with any of the WS-specifications.</p>				
8.	<p>Write the types of components that can be used to build J2EE Web applications. J2EE solutions inherently are distributed and componentized. The following types of components can be used to build J2EE Web applications: Java Server Pages (JSPs): Dynamically generated Web pages hosted by the Web server. JSPs exist as text files comprised of code interspersed with HTML. Struts: An extension to J2EE that allows for the development of Web applications with sophisticated user -interfaces and navigation. Java Servlets: These components also reside on the Web server and are used to process HTTP request and response exchanges. Unlike JSPs, servlets are compiled programs. Enterprise JavaBeans (EJBs): The business components that perform the bulk of the processing within enterprise solution environments.</p>				
9.	<p>What are the overall goals of performing a service-oriented analysis?</p> <ul style="list-style-type: none"> ✓ Define a preliminary set of service operation candidates. ✓ Group service operation candidates into logical contexts. These contexts represent service candidates. ✓ Define preliminary service boundaries so that they do not overlap with any existing or planned services. ✓ Identify encapsulated logic with reuse potential. ✓ Ensure that the context of encapsulated logic is appropriate for its intended use. ✓ Define any known preliminary composition models. 				
10.	<p>What are the characteristics of Application services?</p> <ul style="list-style-type: none"> ✓ Application services expose functionality within a specific processing context ✓ They draw upon available resources within a given platform ✓ They are solution-agnostic, generic and reusable ✓ They can be used to achieve point-to-point integration with other application services ✓ They are often inconsistent in terms of the interface granularity they expose ✓ They may consist of a mixture of custom-developed services and third-party services that have been purchased or leased. 				
11.	<p>How does the use of orchestration establish the structure in the services layer? The use of orchestration establishes the following structure in the services layer:</p> <ul style="list-style-type: none"> ✓ Workflow logic and process-specific business rules are embedded in a process definition. Orchestration composes business services according to this definition. ✓ Business services compose application services to execute business logic. ✓ Application services interact with underlying systems to process the required functions. 				
12.	<p>Compare "Building Blocks" versus "Service Models".</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Building Blocks</th> <th style="width: 50%; text-align: center;">Service Models</th> </tr> </thead> <tbody> <tr> <td style="height: 20px;"> </td> <td style="height: 20px;"> </td> </tr> </tbody> </table>	Building Blocks	Service Models		
Building Blocks	Service Models				





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<p>Building blocks are not an independent means of classifying service logic.</p>	<p>Service models are useful for classifying the nature of logic encapsulated by a service; building blocks classify the <i>scope</i> of service logic.</p>
<p>A building block can also represent a subset of a service's logic or the collective logic of multiple services.</p>	<p>The service model always will apply to a single service, but a building block can apply to a range of logic.</p>
<p>13. Name the key principles as those not intrinsically provided through the use of Web services. Reusability, Autonomy, Statelessness and Discoverability.</p>	
<p>14. Explore scenarios based on the use of the types of services.</p> <ul style="list-style-type: none"> ✓ Hybrid application services (services containing both business process and application logic) ✓ Utility application services (services containing reusable application logic) ✓ Task-centric business services (services containing business process logic) ✓ Entity-centric business services (services containing entity business logic) ✓ Process services (services representing the orchestration service layer). 	
<p>15. What do you mean by the binding element in WSDL? The binding element begins the concrete portion of the service definition, to assign a communications protocol that can be used to access and interact with the WSDL. The binding element appears similar in structure to the portType element. The binding construct contains one or more operation elements. The additional soap:binding and soap:operation elements combined within the construct syntax. These are what establish the SOAP protocol as the manner in which this WSDL can be communicated with.</p>	
<p>16. List out the overall goals of performing a service-oriented design.</p> <ul style="list-style-type: none"> ✓ Determine the core set of architectural extensions. ✓ Set the boundaries of the architecture. ✓ Identify required design standards. ✓ Define abstract service interface designs. ✓ Identify potential service compositions. ✓ Assess support for service-orientation principles. ✓ Explore support for characteristics of contemporary SOA. 	





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17. **Write the syntax for getVariableData function in WS-BPEL. (Nov 2016)**

getVariableData(variable name, part name, location path)

Because variables are used to manage state information, this function is required to provide other parts of the process logic access to this data.

The getVariableData function has a mandatory variable name parameter and two optional arguments that can be used to specify a part of the variable data.

The getVariableData function a number of times to retrieve message data from variables.

Example. Two getVariableData functions being used to retrieve specific pieces of data from different variables:

getVariableData ('InvoiceHoursResponse', 'ResponseParameter')

getVariableData ('input','payload', '/tns:TimesheetType/Hours/...').

18. **What is J2EE? (May 2017)**

The Java 2 Platform Enterprise Edition (J2EE) is built to support large-scale, distributed solutions. J2EE is used to build traditional n-tier applications with and without Web technologies. It is one of the two primary platforms currently being used to develop enterprise solutions using Web services.

19. **List the building blocks that form the part of the SO Enterprise (SOE) model.**

- ✓ Primitive business activity
- ✓ Primitive business service
- ✓ Primitive business process
- ✓ Extended business process
- ✓ Enterprise domain business process
- ✓ Enterprise business process.

20. **Write the steps in individual design process.**

The first step is an SOA composition exercise that helps identify the architectural boundary of our planned solution. The remaining steps consist of following individual design process

- ✓ Entity centric business service design.
- ✓ Application service design.
- ✓ Task centric business service design
- ✓ Service oriented business process design.

21. **What is service modeling process? (Nov 2017)**

Service modeling is the process of conceptualizing services and capabilities prior to their actual physical definition and development.

Service modeling identifies service capability candidates that are grouped into service candidates that are subsequently assembled into service composition candidates.





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22. **What is the use of service interface and application interface layers?**

Service interface layer consists of set of services that hide complexity of communicating with either application software or to business services.

Application interface layer consist of set of application services that represents technology specific logic. There are two types of application interface layer.

They are utility model and wrapper model.

23. **List out the benefits that can be attained by creating the service contract prior to the service logic.**

- ✓ Services can be designed to accurately represent the context and function of their corresponding service candidates.
- ✓ Conventions can be applied to service operation names, which lead to standardized endpoint definitions.
- ✓ The granularity of operations can be modeled in abstract to provide consistent and predictable interface designs that establish a message size and volume ratio suitable for the target communications infrastructure.
- ✓ Underlying applications are required to conform to the expression of the service design, not vice versa.
- ✓ The design of business services can be assisted by business analysts to ensure an accurate representation of business logic.

24. **Write any four attributes of 'invoke' element of BPEL. (Nov 2017)**

partnerLink, portType, operation, inputVariable and outputVariable are the four attributes of 'invoke' element of BPEL.

25. **How is J2EE platform divided?**

The Java 2 Platform is divided into three development and runtime platforms:

The *Java 2 Platform Standard Edition (J2SE)* is designed to support the creation of desktop applications.

The *Micro Edition (J2ME)* is geared toward applications that run on mobile devices.

The *Java 2 Platform Enterprise Edition (J2EE)* is built to support large-scale, distributed solutions.

26. **Differentiate entity centric and task centric services.**

Entity centric service	Task centric service
It is derived from entity model	It is derived from business workflow logic
Entity centric services significantly increase organization agility	Compare with entity centric service this service offer less support to organization agility
Entity centric do require more up front analysis, increasing both the cost and money required to produce each service	Task centric are easy to implement

27. **Mention the difference between "Services" and "Service Candidates".**

Services

Service Candidates





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<p>They are the end result of service oriented design stage.</p>	<p>They are the end result of service oriented analysis stage or service modeling.</p>
<p>They are the physical implementation or realization of Service Candidates.</p>	<p>They are the abstract specification of actual service. They are submitted to the SOA design process to implement service in specific technology.</p>
<p>28. List out the two business service models supported by business services layer. Task centric business services:- A service that encapsulates business logic specific to a task or business process is referred to as task centric business services. It is derived from business workflow logic. e.g. Sequence of services executed for online shopping includes: Add to cart services, View cart services, Pay mode selection service, Credit card verification service and Bill generation service. Entity centric business service:- It encapsulates a set of operation that operates on business entities (database tables) such as invoice, bank account. It is derived from business entities. e.g. Service offered for bank account entity includes: Creation of bank account service, Show balance service, Withdraw services, Deposit service and Money transfer service.</p>	
<p>29. Mention the difference between “service oriented architecture” and “service oriented environment”.</p>	
<p style="text-align: center;">Service oriented architecture</p> <p>It represents a technical view of a business automation solution based on service orientation principles.</p>	<p style="text-align: center;">Service oriented environment</p> <p>It refers to the logical enterprise domain in which service oriented principles are applied.</p>
<p>30. Define WS-Policy. (May 2018) The WS-Policy framework establishes a means of expressing service metadata beyond the WSDL definition. It allows services to communicate rules and preferences in relation to security, processing, or message content. Policies can be applied to a variety of Web resources, positioning this specification as another part of the WS-* extensions</p>	





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31. **Define ASP.NET Web Forms. (May 2018)**

Web Forms and ASP.NET were created to overcome some of the limitations of ASP. These new strengths include:

- Separation of HTML interface from application logic
- A rich set of server-side controls that can detect the browser and send out appropriate markup language such as HTML
- Less code to write due to the data binding capabilities of the new server-side .NET controls
- Event-based programming model that is familiar to Microsoft Visual Basic® programmers
- Compiled code and support for multiple languages, as opposed to ASP which was interpreted as Microsoft Visual Basic Scripting (VBScript) or Microsoft Jscript.
- Allows third parties to create controls that provide additional functionality.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2019-2020
Important Questions – 7th Semester – Regulation 2013

Year / Sem: IV /VII

Subject Code / Name: IT6801 / Service Oriented Architecture

Unit – I-V

1. Discuss about XML document structure in detail
2. Discuss on name space are available in XML Documents
3. explain about XML-DTD with suitable example
4. Discuss Well formed and valid document is XML schema language
5. Discuss: (a) X-Link (b) X-Path (c) Axis
6. What are the techniques are available in XML parsing with DOM pars
7. Discuss about SAX-Parsing with suitable example
8. Explain about XSL-Technologies and its functionality
9. Compare XSL-Transformation vs XML –Transformation
10. Discuss about XML –Modeling Database objects
11. Explain JAXB-Binding methods in XML Schema
12. Discuss Distributed and internet architecture architecture
13. Explain client server and distributed architecture
14. Discuss about characteristics of Service oriented architecture, benefit, principles
15. Discuss WSDL Basis and its attribute elements
16. Explain SOAP-Message passing technique
17. Explain service discovery and UDDI
18. Explain (a) t Orchestration and its functionality (b) Choreography (c) WS-Transaction
19. Discuss service oriented analysis and design pattern
20. Discuss Service modeling in SOA application
21. Elaborate (a)S-BPEL (b) WS-Coordination (c)S-Policy (d) WS-Security
22. Explain SOA support for J2EE





Reg. No. :

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Question Paper Code : 41302

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018
Seventh/Eighth Semester
Information Technology
IT 6801 – SERVICE ORIENTED ARCHITECTURE
(Common to Computer Science and Engineering)
(Regulations 2013)

03/05/11
(M)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. Define Service-oriented architecture.
2. State service component.
3. State the characteristics of Orchestration service layer.
4. Define Soap message.
5. Write the IT-centric entry points.
6. What is the responsibility of the service ?
7. List down the basic platform blocks.
8. Define ASP.NET Web Forms.
9. Mention the three types of Choreography.
10. Define WS-Policy.

PART – B

(5×16=80 Marks)

11. a) Explain the characteristics of SOA in detail.

(OR)

- b) Mention the principles of service orientation standardized in detail.





12. a) Discuss on the protocols of Atomic Transaction in detail.
(OR)
b) Describe the elements of Web services platform in detail.
13. a) Explain about the operations in entity centric.
(OR)
b) Compare SOA with distributed client-server architecture. Discuss the anatomy of service oriental architecture.
14. a) Discuss on how SOA is related to the layers of the J2EE platform.
(OR)
b) Mention the benefits of JAX_RPC in detail.
15. a) Describe the Web Services Security Requirements in detail.
(OR)
b) List out the Security Threads in detail.
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