



PKM Educational Trust ®

# R. R. Institute of Technology

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Accredited by NAAC with 'B+'

Raja Reddy Layout, Chikkabanavara, Bengaluru – 560 090

Department of Computer Science & Engineering

## URL Link for 18 Scheme ODD Sem

SN	Subject code	Subject Name	Link
<b>Semester 3<sup>rd</sup> SEM</b>			
01	18CS32	Data Structures & Applications	<a href="https://dzone.com/articles/data-structures-and-their-applications">https://dzone.com/articles/data-structures-and-their-applications</a> <a href="https://www.simplilearn.com/tutorials/data-structure-tutorial/what-is-data-structure">https://www.simplilearn.com/tutorials/data-structure-tutorial/what-is-data-structure</a> <a href="https://csveda.com/data-structure/applications-of-data-structures/">https://csveda.com/data-structure/applications-of-data-structures/</a> <a href="https://www.azdocuments.in/2020/01/data-structures-and-application-18cs32.html?m=1">https://www.azdocuments.in/2020/01/data-structures-and-application-18cs32.html?m=1</a> <a href="https://www.geeksforgeeks.org/real-time-application-of-data-structures/">https://www.geeksforgeeks.org/real-time-application-of-data-structures/</a> <a href="https://www.integralist.co.uk/posts/data-types-and-data-structures/">https://www.integralist.co.uk/posts/data-types-and-data-structures/</a> <a href="https://www.geeksforgeeks.org/difference-between-linear-and-non-linear-data-structures/">https://www.geeksforgeeks.org/difference-between-linear-and-non-linear-data-structures/</a>
02	18CS33	Analog and Digital Electronics	<a href="https://www.scienceabc.com/innovation/whats-the-difference-between-analog-and-digital-circuits.html">https://www.scienceabc.com/innovation/whats-the-difference-between-analog-and-digital-circuits.html</a>  <a href="https://www.geeksforgeeks.org/introduction-of-k-map-karnaugh-map/">https://www.geeksforgeeks.org/introduction-of-k-map-karnaugh-map/</a>  <a href="https://www.javatpoint.com/karnaugh-map-in-digital-electronics">https://www.javatpoint.com/karnaugh-map-in-digital-electronics</a>  <a href="https://www.electronics-tutorials.ws/combinational/comb_2.html">https://www.electronics-tutorials.ws/combinational/comb_2.html</a>  <a href="https://www.javatpoint.com/vhdl">https://www.javatpoint.com/vhdl</a>  <a href="https://www.javatpoint.com/computer-registers">https://www.javatpoint.com/computer-registers</a>
03	18CS34	Computer Organization	<a href="https://www.learncomputerscienceonline.com/machine-instruction/">https://www.learncomputerscienceonline.com/machine-instruction/</a> <a href="https://www.geeksforgeeks.org/types-of-machine-instructions/">https://www.geeksforgeeks.org/types-of-machine-instructions/</a>

			<a href="https://www.studytonight.com/computer-architecture/memory-organization">https://www.studytonight.com/computer-architecture/memory-organization</a> <a href="https://www.tutorialspoint.com/computer_fundamentals/computer_memory.htm">https://www.tutorialspoint.com/computer_fundamentals/computer_memory.htm</a> <a href="https://www.geeksforgeeks.org/cache-memory-in-computer-organization/">https://www.geeksforgeeks.org/cache-memory-in-computer-organization/</a> <a href="https://www.cise.ufl.edu/~mssz/CompOrg/CDA-arith.html">https://www.cise.ufl.edu/~mssz/CompOrg/CDA-arith.html</a> <a href="https://www.javatpoint.com/coa-arithmetic-micro-operations">https://www.javatpoint.com/coa-arithmetic-micro-operations</a> <a href="https://www.slideshare.net/siddiqueibrahim37/hardwired-control">https://www.slideshare.net/siddiqueibrahim37/hardwired-control</a> <a href="https://www.lkouniv.ac.in/site/writereaddata/siteContent/202004221613338445rohit_eng_g_pipelining_and_hazzard.pdf">https://www.lkouniv.ac.in/site/writereaddata/siteContent/202004221613338445rohit_eng_g_pipelining_and_hazzard.pdf</a> <a href="https://www.slideshare.net/KamalAcharya/micro-programmed-control-unit">https://www.slideshare.net/KamalAcharya/micro-programmed-control-unit</a>
04	18CS35	Software Engineering	<a href="https://www.tutorialspoint.com/sdlc/sdlc_waterfall_model.htm">https://www.tutorialspoint.com/sdlc/sdlc_waterfall_model.htm</a>  <a href="https://www.guru99.com/what-is-incremental-model-in-sdlc-advantages-disadvantages.html">https://www.guru99.com/what-is-incremental-model-in-sdlc-advantages-disadvantages.html</a>  <a href="https://www.worldscientific.com/doi/10.1142/9789812389718_0031">https://www.worldscientific.com/doi/10.1142/9789812389718_0031</a>  <a href="https://ifs.host.cs.st-andrews.ac.uk/Books/SE7/Presentations/PDF/ch8.pdf">https://ifs.host.cs.st-andrews.ac.uk/Books/SE7/Presentations/PDF/ch8.pdf</a>  <a href="https://www.sciencedirect.com/topics/computer-science/model-driven-engineering">https://www.sciencedirect.com/topics/computer-science/model-driven-engineering</a>  <a href="https://www.tutorialspoint.com/software_engineering/software_testing_overview.htm">https://www.tutorialspoint.com/software_engineering/software_testing_overview.htm</a>  <a href="https://www.geeksforgeeks.org/cost-estimation-models-in-software-engineering/">https://www.geeksforgeeks.org/cost-estimation-models-in-software-engineering/</a> <a href="https://ecomputernotes.com/software-engineering/tools-for-software-maintenance">https://ecomputernotes.com/software-engineering/tools-for-software-maintenance</a>
05	18CS36	Discrete Mathematics Structures	<a href="https://math.libretexts.org/Bookshelves/Combinatorics_and_Discrete_Mathematics/Elementary_Number_Theory_(Raji)/01%3A_Introduction/1.02%3A_The_Well_Ordering_Principle_and_Mathematical_Induction">https://math.libretexts.org/Bookshelves/Combinatorics_and_Discrete_Mathematics/Elementary_Number_Theory_(Raji)/01%3A_Introduction/1.02%3A_The_Well_Ordering_Principle_and_Mathematical_Induction</a>  <a href="https://www.tutorialspoint.com/discrete_mathematics/discrete_mathematics_relations.htm">https://www.tutorialspoint.com/discrete_mathematics/discrete_mathematics_relations.htm</a>

			<a href="https://www.slideshare.net/uyar/discrete-mathematics-relations-and-functions">https://www.slideshare.net/uyar/discrete-mathematics-relations-and-functions</a>  <a href="https://brilliant.org/wiki/principle-of-inclusion-and-exclusion-pie/">https://brilliant.org/wiki/principle-of-inclusion-and-exclusion-pie/</a>  <a href="https://www.tutorialspoint.com/discrete_mathematics/discrete_mathematics_functions.htm">https://www.tutorialspoint.com/discrete_mathematics/discrete_mathematics_functions.htm</a>  <a href="https://www.tutorialspoint.com/discrete_mathematics/graph_and_graph_models.htm">https://www.tutorialspoint.com/discrete_mathematics/graph_and_graph_models.htm</a>  <a href="https://www.cs.utexas.edu/~isil/cs311h/lecture-graph1b-6up.pdf">https://www.cs.utexas.edu/~isil/cs311h/lecture-graph1b-6up.pdf</a>
<b>Semester 5<sup>th</sup> SEM</b>			
01	18CS51	Management & entrepreneurship	<a href="https://qsstudy.com/relationship-entrepreneurship-management/">https://qsstudy.com/relationship-entrepreneurship-management/</a>  <a href="https://byjus.com/commerce/difference-between-management-and-entrepreneurship/">https://byjus.com/commerce/difference-between-management-and-entrepreneurship/</a>  <a href="https://byjus.com/commerce/what-is-entrepreneurship/">https://byjus.com/commerce/what-is-entrepreneurship/</a>  <a href="https://www.tgilt.com/erp-selection-resources/erp-software-selection-process/erp-project-planning">https://www.tgilt.com/erp-selection-resources/erp-software-selection-process/erp-project-planning</a>  <a href="https://www.netsuite.com/portal/resource/articles/erp/erp-implementation-phases.shtml">https://www.netsuite.com/portal/resource/articles/erp/erp-implementation-phases.shtml</a>  <a href="https://www.hdfcbank.com/personal/resources/learning-centre/borrow/difference-between-micro-small-and-medium-enterprises">https://www.hdfcbank.com/personal/resources/learning-centre/borrow/difference-between-micro-small-and-medium-enterprises</a>  <a href="https://www.managementstudyguide.com/intellectual-property-rights.htm">https://www.managementstudyguide.com/intellectual-property-rights.htm</a>

02	18CS52	Computer networks and security	<p>javatpoint.com/computer-network-application-layer</p> <p><a href="https://www.geeksforgeeks.org/application-layer-in-osi-model/">https://www.geeksforgeeks.org/application-layer-in-osi-model/</a></p> <p><a href="https://www.router-switch.com/faq/what-is-application-layer-the-functions-and-examples-of-application-layer.html">https://www.router-switch.com/faq/what-is-application-layer-the-functions-and-examples-of-application-layer.html</a></p> <p>studytonight.com/computer-networks/osi-model-application-layer</p> <p><a href="https://onlinelibrary.wiley.com/doi/10.1002/9781119436294.ch10">https://onlinelibrary.wiley.com/doi/10.1002/9781119436294.ch10</a></p> <p><a href="https://en.wikipedia.org/wiki/Peer-to-peer_file_sharing">https://en.wikipedia.org/wiki/Peer-to-peer_file_sharing</a></p> <p><a href="https://www.geeksforgeeks.org/congestion-control-techniques-in-computer-networks/">https://www.geeksforgeeks.org/congestion-control-techniques-in-computer-networks/</a></p> <p><a href="https://www.cse.wustl.edu/~jain/cis788-95/ftp/atm_cong/index.html">https://www.cse.wustl.edu/~jain/cis788-95/ftp/atm_cong/index.html</a></p> <p><a href="https://www.gatevidyalay.com/distance-vector-routing-routing-algorithms/">https://www.gatevidyalay.com/distance-vector-routing-routing-algorithms/</a></p>
03	18CS53	Database Management	<p><a href="https://medium.com/oceanize-geeks/concepts-of-database-architecture-dfdc558a93e4">https://medium.com/oceanize-geeks/concepts-of-database-architecture-dfdc558a93e4</a></p> <p><a href="https://www.javatpoint.com/dbms-architecture">https://www.javatpoint.com/dbms-architecture</a></p> <p><a href="https://intellipaat.com/blog/what-is-database/">https://intellipaat.com/blog/what-is-database/</a></p> <p><a href="https://www.simplilearn.com/tutorials/sql-tutorial/er-diagram-in-dbms">https://www.simplilearn.com/tutorials/sql-tutorial/er-diagram-in-dbms</a></p> <p><a href="https://learnsql.com/blog/what-is-advanced-sql/">https://learnsql.com/blog/what-is-advanced-sql/</a></p> <p><a href="https://www.khanacademy.org/computing/computer-programming/sql/more-advanced-sql-queries/pt/more-complex-queries-with-andor">https://www.khanacademy.org/computing/computer-programming/sql/more-advanced-sql-queries/pt/more-complex-queries-with-andor</a></p> <p><a href="https://www.complexsql.com/complex-sql-queries-examples-with-answers/">https://www.complexsql.com/complex-sql-queries-examples-with-answers/</a></p> <p><a href="https://www.guru99.com/database-normalization.html">https://www.guru99.com/database-normalization.html</a></p>

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04	18CS54	Automata Theory & Computability	<a href="https://www.elprocus.com/finite-state-machine-mealy-state-machine-and-moore-state-machine/">https://www.elprocus.com/finite-state-machine-mealy-state-machine-and-moore-state-machine/</a>  <a href="https://brilliant.org/wiki/finite-state-machines/">https://brilliant.org/wiki/finite-state-machines/</a>  <a href="https://www.javatpoint.com/automata-regular-expression">https://www.javatpoint.com/automata-regular-expression</a>  <a href="https://www.geeksforgeeks.org/regular-expressions-regular-grammar-and-regular-languages/">https://www.geeksforgeeks.org/regular-expressions-regular-grammar-and-regular-languages/</a>  <a href="https://brilliant.org/wiki/context-free-grammars/">https://brilliant.org/wiki/context-free-grammars/</a>  <a href="https://www.geeksforgeeks.org/introduction-of-pushdown-automata/">https://www.geeksforgeeks.org/introduction-of-pushdown-automata/</a>  <a href="http://www.math.uaa.alaska.edu/~afkjm/csce351/handouts/pda.pdf">http://www.math.uaa.alaska.edu/~afkjm/csce351/handouts/pda.pdf</a>  <a href="https://www.tutorialspoint.com/automata_theory/turing_machine_introduction.htm">https://www.tutorialspoint.com/automata_theory/turing_machine_introduction.htm</a>  <a href="https://plato.stanford.edu/entries/turing-machine/">https://plato.stanford.edu/entries/turing-machine/</a>  <a href="https://www.geeksforgeeks.org/turing-machine-in-toc/">https://www.geeksforgeeks.org/turing-machine-in-toc/</a>  <a href="https://scanfree.com/automata/linear-bounded-automata">https://scanfree.com/automata/linear-bounded-automata</a>  <a href="https://dl.acm.org/doi/abs/10.5555/1096945.C1065804">https://dl.acm.org/doi/abs/10.5555/1096945.C1065804</a>
05	18CS55	Application Development using Python	<a href="https://www.w3schools.com/python/python_intro.asp">https://www.w3schools.com/python/python_intro.asp</a>  <a href="https://www.programiz.com/python-programming">https://www.programiz.com/python-programming</a>

			<p><a href="https://www.geeksforgeeks.org/python-programming-language/">https://www.geeksforgeeks.org/python-programming-language/</a></p> <p><a href="https://www.geeksforgeeks.org/python-dictionary/">https://www.geeksforgeeks.org/python-dictionary/</a></p> <p><a href="https://realpython.com/python-dicts/">https://realpython.com/python-dicts/</a></p> <p><a href="https://developers.google.com/edu/python/dict-files">https://developers.google.com/edu/python/dict-files</a></p> <p><a href="https://www3.ntu.edu.sg/home/ehchua/programming/howto/Regexe.html">https://www3.ntu.edu.sg/home/ehchua/programming/howto/Regexe.html</a></p> <p><a href="https://www.programiz.com/python-programming/class">https://www.programiz.com/python-programming/class</a></p> <p><a href="https://intellipaat.com/blog/tutorial/python-tutorial/python-classes-and-objects/">https://intellipaat.com/blog/tutorial/python-tutorial/python-classes-and-objects/</a></p> <p><a href="https://www.edureka.co/blog/web-scraping-with-python/">https://www.edureka.co/blog/web-scraping-with-python/</a></p> <p><a href="https://www.dataquest.io/blog/web-scraping-python-using-beautiful-soup/">https://www.dataquest.io/blog/web-scraping-python-using-beautiful-soup/</a></p> <p><a href="https://datatofish.com/json-string-to-csv-python/">https://datatofish.com/json-string-to-csv-python/</a></p>
06	18CS56	Unix Programming	<p><a href="https://www.tutorialspoint.com/unix/unix-getting-started.htm">https://www.tutorialspoint.com/unix/unix-getting-started.htm</a></p> <p><a href="https://www.javatpoint.com/unix-operating-system">https://www.javatpoint.com/unix-operating-system</a></p> <p><a href="https://www.educba.com/unix-architecture/">https://www.educba.com/unix-architecture/</a></p> <p><a href="https://www.tutorialspoint.com/unix/unix-file-management.htm">https://www.tutorialspoint.com/unix/unix-file-management.htm</a></p> <p><a href="https://www.cs.utah.edu/~zachary/isp/tutorials/files/files.html">https://www.cs.utah.edu/~zachary/isp/tutorials/files/files.html</a></p> <p><a href="https://homepages.uc.edu/~thomam/Intro_Unix_Text/File_System.html">https://homepages.uc.edu/~thomam/Intro_Unix_Text/File_System.html</a></p> <p><a href="https://www.sawaipurush.com/moodle/mod/page/view.php?id=13">https://www.sawaipurush.com/moodle/mod/page/view.php?id=13</a></p> <p><a href="https://www.softwaretestinghelp.com/unix-processes/">https://www.softwaretestinghelp.com/unix-processes/</a></p> <p><a href="https://www.geeksforgeeks.org/methods-in-interprocess-communication/">https://www.geeksforgeeks.org/methods-in-interprocess-communication/</a></p>

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<b>Semester 7<sup>th</sup> SEM</b>			
01	18CS71	Artificial Intelligence and Machine Learning	<a href="https://www.techtarget.com/searchenterpriseai/definition/AI-Artificial-Intelligence">https://www.techtarget.com/searchenterpriseai/definition/AI-Artificial-Intelligence</a>  <a href="https://www.mygreatlearning.com/blog/what-is-artificial-intelligence/">https://www.mygreatlearning.com/blog/what-is-artificial-intelligence/</a>  <a href="https://www.baeldung.com/cs/candidate-elimination-algorithm">https://www.baeldung.com/cs/candidate-elimination-algorithm</a>  <a href="https://www.javatpoint.com/artificial-neural-network">https://www.javatpoint.com/artificial-neural-network</a>
02	18CS72	Big Data Analytics	<a href="https://data-flair.training/blogs/big-data-case-studies/">https://data-flair.training/blogs/big-data-case-studies/</a>  <a href="https://www.analyticsvidhya.com/blog/2020/10/introduction-hadoop-ecosystem/">https://www.analyticsvidhya.com/blog/2020/10/introduction-hadoop-ecosystem/</a>  <a href="https://data-flair.training/blogs/hadoop-ecosystem-components/">https://data-flair.training/blogs/hadoop-ecosystem-components/</a>  <a href="https://searchdatamanagement.techtarget.com/definition/Hadoop-Distributed-File-System-HDFS">https://searchdatamanagement.techtarget.com/definition/Hadoop-Distributed-File-System-HDFS</a>  <a href="https://www.mongodb.com/big-data-explained/architecture">https://www.mongodb.com/big-data-explained/architecture</a>
03	18CS734	User Interface Design	<a href="https://www.geeksforgeeks.org/software-engineering-user-interface-design/">https://www.geeksforgeeks.org/software-engineering-user-interface-design/</a>  <a href="https://www.usability.gov/what-and-why/user-interface-design.html">https://www.usability.gov/what-and-why/user-interface-design.html</a>  <a href="https://www.britannica.com/technology/graphical-user-interface">https://www.britannica.com/technology/graphical-user-interface</a>
04	18CS742	Network management	<a href="https://www.techtarget.com/searchnetworking/definition/network-operations-center">https://www.techtarget.com/searchnetworking/definition/network-operations-center</a>  <a href="https://www.quora.com/p/3377/describe-different-network-management-models-and-1/">https://www.quora.com/p/3377/describe-different-network-management-models-and-1/</a>  <a href="https://www.geeksforgeeks.org/simple-network-management-protocol-snmp/">https://www.geeksforgeeks.org/simple-network-management-protocol-snmp/</a>

			<a href="https://www.geeksforgeeks.org/introduction-to-asymmetric-digital-subscriber-line-adsl/">https://www.geeksforgeeks.org/introduction-to-asymmetric-digital-subscriber-line-adsl/</a>
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