

# **SWAMI VIVEKANAND UNIVERSITY, SIRONJA, SAGAR (M.P.)**



## **SYLLABUS**

**For**

**BACHELOR OF TECHNOLOGY (B.Tech)  
CEMENT TECHNOLOGY**

**Course Code : BTCT**

Department of Civil Engineering

Faculty of Engineering

Duration of Course	: 4 Years
Examination Mode	: Semester
Examination System	: Grading

Swami Vivekanand University, Sironja Sagar (M.P.)  
2014-2015



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering  
Scheme of Course : B.Tech in Cement Technology

Department : Civil Engineering  
Course Code : BTCT

Semester/Year :- 1<sup>st</sup> Sem

S. No.	Subject Code	Subject	Period s per Week				Distribution of Marks							Grand Total (i) = (d)+(h)	
			L	T	P	C	Theory		MST (c)	Total (d) = (a)+(c)	Practical		TW (g)		Total (h) = (e)+(f)
							Max (a)	Min (b)			Max (e)	Min (f)			
1	BTCT-0101	Mathematics - I	3	1	-	4	80	25	20	100	-	-	-	-	100
2	BTCT-0102	Fundamentals of Physics	3	1	2	6	80	25	20	100	50	15	50	100	200
3	BTCT-0103	Chemistry	3	1	2	6	80	25	20	100	50	15	50	100	200
4	BTCT-0104	Basic Engg.- I	3	1	2	6	80	25	20	100	50	15	50	100	200
5	BTCT-0105	Computer Lab	-	-	2	2	-	-	-	-	-	-	50	50	50
6	BTCT-0106	Workshop Practice	-	-	2	2	-	-	-	-	50	15	50	100	100
7	BTCT-0107	English	3	1	-	4	80	25	20	100	-	-	-	-	100
8	BTCT-0108	Project - I	-	-	4	4	-	-	-	-	-	-	50	50	50
<b>Total -&gt;</b>			<b>15</b>	<b>5</b>	<b>14</b>	<b>34</b>	<b>400</b>	<b>125</b>	<b>100</b>	<b>500</b>	<b>200</b>	<b>60</b>	<b>300</b>	<b>500</b>	<b>1000</b>



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering  
Scheme of Course : B.Tech in Cement Technology

Department : Civil Engineering  
Course Code : BTCT

Semester/Year :- 2<sup>nd</sup> Sem

S. No.	Subject Code	Subject	Period s per Week				Distribution of Marks								Grand Total (i) = (d)+(h)
			L	T	P	C	Theory		MST (c)	Total (d) = (a)+(c)	Practical		TW (g)	Total (h) = (e)+(f)	
							Max (a)	Min (b)			Max (e)	Min (f)			
1	BTCT-0201	Mathematics - II	3	1	-	4	80	25	20	100	-	-	-	-	100
2	BTCT-0202	Material Physics	3	1	2	6	80	25	20	100	50	15	50	100	200
3	BTCT-0203	Energy & Environment Science	3	1	-	4	80	25	20	100	-	-	-	-	100
4	BTCT-0204	Basic Engg.- II	3	1	2	6	80	25	20	100	50	15	50	100	200
5	BTCT-0205	Computer Science	3	1	2	6	80	25	20	100	50	15	50	100	200
6	BTCT-0206	Engg. Graphics Lab	-	-	2	2	-	-	-	-	50	15	50	100	100
7	BTCT-0207	Seminar/GD/Lang. Lab	-	-	2	2	-	-	-	-	-	-	50	50	50
8	BTCT-0208	Project work-II	-	-	4	4	-	-	-	-	-	-	50	50	50
<b>Total -&gt;</b>			<b>15</b>	<b>5</b>	<b>14</b>	<b>34</b>	<b>400</b>	<b>-</b>	<b>100</b>	<b>500</b>	<b>200</b>	<b>-</b>	<b>300</b>	<b>500</b>	<b>1000</b>



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering  
Scheme of Course : B.Tech in Cement Technology

Department : Civil Engineering  
Course Code : BTCT

Semester/Year :- 3 Sem

S. No.	Subject Code	Subject	Periods per Week				Distribution of Marks							Grand Total (i) = (d)+(h)	
			L	T	P	C	Theory		MST (c)	Total (d) = (a)+(c)	Practical		TW (g)		Total (h) = (e)+(f)
							Max (a)	Min (b)			Max (e)	Min (f)			
1	BTCT-0301	Engineering Mathematics – II	3	1	-	4	80	25	20	100	-	-	-	-	100
2	BTCT-0302	Geology Of Raw Materials	3	1	-	4	80	25	20	100	-	-	-	-	100
3	BTCT-0303	Fuels, Furnaces and Pyrometry	3	1	2	6	80	25	20	100	50	15	50	100	200
4	BTCT-0304	Momentum Transfer	3	1	2	6	80	25	20	100	50	15	50	100	200
5	BTCT-0305	Mechanical Operations	3	1	2	6	80	25	20	100	50	15	50	100	200
6	BTCT-0306	Computer Programming-I	-	-	2	2	-	-	-	-	50	15	50	100	100
7	BTCT-0307	Seminar	-	-	2	2	-	-	-	-	-	-	50	50	50
8	BTCT-0308	Project Work - III	-	-	2	2	-	-	-	-	-	-	50	50	50
<b>Total -&gt;</b>			15	5	12	32	400		100	500	200	-	300	500	1000



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering  
Scheme of Course : B.Tech in Cement Technology

Department : Civil Engineering  
Course Code : BTCT  
Semester/Year :- 4 Sem

S. No.	Subject Code	Subject	Period s per Week				Distribution of Marks							Grand Total (i) = (d)+(h)	
			L	T	P	C	Theory		MST (c)	Total (d) = (a)+(c)	Practical		TW (g)		Total (h) = (e)+(f)
							Max (a)	Min (b)			Max (e)	Min (f)			
1	BTCT-0401	Concrete Technology	3	1	-	4	80	25	20	100	-	-	-	-	100
2	BTCT-0402	Material Science	3	1	-	4	80	25	20	100	-	-	-	-	100
3	BTCT-0403	White wares & Heavy Claywares	3	1	2	6	80	25	20	100	50	15	50	100	200
4	BTCT-0404	Engineering Thermodynamics	3	1	2	6	80	25	20	100	50	15	50	100	200
5	BTCT-0405	Heat Transfer	3	1	2	6	80	25	20	100	50	15	50	100	200
6	BTCT-0406	Computer Programming-II	-	-	2	2	-	-	-	-	50	15	50	100	100
7	BTCT-0407	Seminar	-	-	2	2	-	-	-	-	-	-	50	50	50
8	BTCT-0408	Project Work - IV	-	-	2	2	-	-	-	-	-	-	50	50	50
<b>Total -&gt;</b>			15	5	12	32	400	-	100	500	200		300	500	300



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering  
Scheme of Course : B.Tech in Cement Technology

Department : Civil Engineering  
Course Code : BTCT

Semester/Year :- 5 Sem

S. No.	Subject Code	Subject	Period s per Week				Distribution of Marks							Grand Total (i) = (d)+(h)	
			L	T	P	C	Theory		MST (c)	Total (d) = (a)+(c)	Practical		TW (g)		Total (h) = (e)+(f)
							Max (a)	Min (b)			Max (e)	Min (f)			
1	BTCT-0501	Cement Technology - I	3	1	-	4	80	25	20	100	-	-	-	-	100
2	BTCT-0502	Structure & Properties Of Materials	3	1	-	4	80	25	20	100	-	-	-	-	100
3	BTCT-0503	Instrumental Methods Of Analysis	3	1	2	6	80	25	20	100	50	15	50	100	200
4	BTCT-0504	Engineering Metallurgy	3	1	2	6	80	25	20	100	50	15	50	100	200
5	BTCT-0505	Process Calculations	3	1	2	6	80	25	20	100	50	15	50	100	200
6	BTCT-0506	Seminar	-	-	2	2	-	-	-	-	-	-	100	100	100
7	BTCT-0507	Project Work - IV	-	-	2	2	-	-	-	-	-	-	100	100	100
<b>Total -&gt;</b>			15	5	12	32	400		100	500	150	-	350	500	1000



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering  
Scheme of Course : B.Tech in Cement Technology

Department : Civil Engineering  
Course Code : BTCT

Semester/Year :- 6 Sem

S. No.	Subject Code	Subject	Period s per Week				Distribution of Marks							Grand Total (i) = (d)+(h)	
			L	T	P	C	Theory		MST (c)	Total (d) = (a)+(c)	Practical		TW (g)		Total (h) = (e)+(f)
							Max (a)	Min (b)			Max (e)	Min (f)			
1	BTCT-0601	Cement Technology – II	3	1	-	4	80	25	20	100	-	-	-	-	100
2	BTCT-0602	Refractories – I	3	1	-	4	80	25	20	100	-	-	-	-	100
3	BTCT-0603	Materials Technology	3	1	2	6	80	25	20	100	50	15	50	100	200
4	BTCT-0604	Process Plant Utilities	3	1	2	6	80	25	20	100	50	15	50	100	200
5	BTCT-0605	Mechanical & Thermal Behavior Of Materials	3	1	2	6	80	25	20	100	50	15	50	100	200
6	BTCT-0606	Project Report	-	-	2	2	-	-	-	-	50	15	50	100	100
7	BTCT-0607	Self Study (Internal Assessment)	-	-	2	2	-	-	-	-	-	-	50	50	50
8	BTCT-0608	Seminar / Group Discussion	-	-	2	2	-	-	-	-	-	-	50	50	50
<b>Total -&gt;</b>			15	5	12	32	400		100	500	200		300	500	1000



# Swami Vivekanand University, Sagar (M.P.)

## Scheme of Examination



Faculty of Engineering  
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Department : Civil Engineering  
Course Code : BTCT

Semester/Year :- 7 Sem

S. No.	Subject Code	Subject	Period s per Week				Distribution of Marks							Grand Total (i) = (d)+(h)	
			L	T	P	C	Theory		MST (c)	Total (d) = (a)+(c)	Practical		TW (g)		Total (h) = (e)+(f)
							Max (a)	Min (b)			Max (e)	Min (f)			
1	BTCT-0701	Entrepreneurship & Managerial Accounting	3	1	-	4	80	25	20	100	0	0	0	0	100
2	BTCT-0702	Refractories - II	3	1	-	4	80	25	20	100	0	0	0	0	100
3	BTCT-0703	Process Control	3	1	2	6	80	25	20	100	50	15	50	100	200
4	BTCT-0704	Mechanical Measurement & Control	3	1	2	6	80	25	20	100	50	15	50	100	200
5	BTCT-0705	Elective-I	3	1	2	6	80	25	20	100	50	15	50	100	200
6	BTCT-0706	Minor Project	-	-	2	2	-	-	-	-	50	15	50	100	100
7	BTCT-0707	Industrial Training	-	-	2	2	-	-	-	-	-	-	50	50	50
8	BTCT-0708	Seminar	-	-	2	2	-	-	-	-	-	-	50	50	50
<b>Total -&gt;</b>			15	5	12	32	400		100	500	200	-	300	500	1000

Elective-I

BTCT-0705(A) Structural Ceramics

BTCT-0705(B) Electro And Magnetic Ceramics





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## Scheme of Examination



Faculty of Engineering  
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Department : Civil Engineering  
Course Code : BTCT  
Semester/Year :- 8 Sem

S. No.	Subject Code	Subject	Period s per Week				Distribution of Marks							Grand Total (i) = (d)+(h)	
			L	T	P	C	Theory		MST (c)	Total (d) = (a)+(c)	Practical		TW (g)		Total (h) = (e)+(f)
							Max (a)	Min (b)			Max (e)	Min (f)			
1	BTCT-0801	Composite Materials	3	1	2	6	80	25	20	100	50	15	50	100	200
2	BTCT-0802	Advanced Refractories	3	1	-	4	80	25	20	100	0	0	0	0	100
3	BTCT-0803	Plant Equipment & Furnace Design	3	1	2	6	80	25	20	100	50	15	50	100	200
4	BTCT-0804	Elective -II	3	1	2	6	80	25	20	100	50	15	50	100	200
5	BTCT-0805	Seminar & group discussion	-	-	4	4	-	-	-	-	-	-	100	100	200
6	BTCT-0806	Major Project	-	-	8	8	-	-	-	-	100	15	100	200	100
<b>Total -&gt;</b>			12	4	18	30	320		80	400	250	-	350	600	1000

Elective -II

BTCT-0804(A) Design with Ceramics

BTCT-0804(B) Physical Properties Of Materials